

DIGITAL DARKROOM QUARTERLY

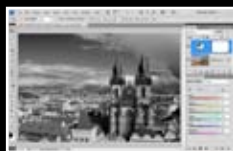
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IN THIS
ISSUE

Photoshop CS5
Group Benefits



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On the Cover

This image of Icelandic horses was captured during an offroad vehicle tour through the “countryside” of Iceland. This pair seemed especially photogenic, so I asked the driver to pull over. Fortunately these horses also approachable, allowing me to get quite close to fine-tune the composition.

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Photoshop CS5

BY TIM GREY

Now that Photoshop is twenty years old, it might seem that every possible feature a photographer could possibly want has already been added. And yet, Adobe continues to find new features to add to this powerful application. So here we are, witnessing version 12 of Photoshop, dubbed “Photoshop CS5”.

To be sure, with each new release of Photoshop it seems the “photo” in “Photoshop” becomes less of an emphasis. The new features of Photoshop CS5 certainly address the needs of 3D artists and videographers more than photographers. But there are still a variety of new features that photographers will find helpful in improving the efficiency and flexibility of their workflow in optimizing their photographic images.

In this article, I focus on the key features that are of greatest interest (in my estimation) to photographers. In the process, you’ll gain a better sense of what’s new in this latest release of Photoshop, and be better equipped to make a decision about whether an upgrade is worthwhile.

Content Aware Cleanup

The new Content-Aware features of Photoshop CS5 have easily been the subject of the greatest amount of coverage leading up to the official release of this new version of Photoshop. Before the official announcement of this new version was even made, Adobe had already provided a “sneak peak” into the advanced capabilities of the new Content-Aware options available for the Fill command as well as the Spot Healing Brush.

Before diving into the incredible capabilities of this new feature, I feel that a reality check is in order. Don’t get me wrong: the Content-Aware feature is quite incredible, and represents some of the incredible potential of Photoshop moving forward. However, this is the first release of this feature, and it isn’t as magical as you might have hoped. One of the things I’m concerned about with this new feature is that the demonstrations you’ll see at various events will lead you to believe it is far more powerful than it actually is. In other words, presenters may find just the right image and learn to work with it in just the right way to achieve impressive results. I sort of think of the Content-Aware feature as being on the same level as the Quick Selection tool. When it works, it is truly amazing. And when it doesn’t work out as well as you had hoped, it can be a little frustrating. However, in either case, if you step back and observe what is happening, the technology is truly impressive.

In other words, the Content-Aware feature is truly remarkable, but it won't provide amazing results in every situation with every image. So, temper your expectations, and look forward to even greater improvements in future versions of Photoshop.

The more basic capability of the Content-Aware feature is found with the Spot Healing Brush. If you've worked with the Spot Healing Brush in previous versions of Photoshop, you are probably aware that it is really just the Healing Brush with the added feature of Photoshop selecting the source area for pixels rather than relying upon you to choose a source before painting a correction into the image. In both cases, once you've painted pixels into the image to replace a problematic area of the image, Photoshop will blend the source pixels into the destination in an effort to ensure the correction blends seamlessly in terms of tone, color, and texture.

As you're probably aware, with the Spot Healing Brush sometimes the automatic selection of a source area wouldn't provide the best results, and in many cases if there was a high-contrast edge nearby the correction would include a "blooming" effect that could be particularly problematic. It was possible to mitigate this at least to some degree by creating a selection before working with the Spot Healing Brush, but doing so negates much of the benefit of working with such an automated tool.

As always, I recommend working with the Spot Healing Brush on a new layer created for the express purpose of applying corrections to the image. When doing so, it is critical to turn on the Sample All Layers option so you'll be copying pixels onto the new layer based on the actual pixels in the image. It is also important to turn off the visibility of any adjustment layers when working with the Spot Healing Brush on a separate layer to ensure the best blending of pixels.

The Proximity Match option on the Options bar can be thought of as the "old" version of the Spot Healing

The Content Aware capabilities of Photoshop CS5 are impressive when they work effectively, though there are often visible artifacts left behind, especially when cleaning up a large area.



Brush. The new Content-Aware option is what you'll want to select in most cases. Doing so causes the Spot Healing Brush to behave more intelligently, observing surrounding areas of the image when applying a correction both for the purposes of choosing a better source area for pixels to be copied as well as resulting in more appropriate blending of pixels with their surroundings so you're much less likely to produce blooming of the pixels.

It is still best to work with the Spot Healing Brush in small areas, using the smallest brush size possible for the correction you're applying. If you work carefully, the Content-Aware option can be a huge benefit. It still won't produce magical results in truly challenging circumstances, but it will prove incredibly helpful for a wide variety of image-cleanup tasks, such as when resolving dust spots in the image or cleaning up small areas of debris within the scene.

Another implementation of the Content-Aware feature is found with the Fill command. This is the option that is more likely to be used to create apparently magical results that you might not be able to produce with "real world" images. When it works, it will prove awe-inspiring. But in many cases the results will be less than ideal, requiring additional work to blend into the rest of the image.

To use the Content-Aware feature of the Fill command, you first need to create a copy of the Background image layer by dragging the thumbnail for that layer to the Create a New Layer button (the blank sheet of paper icon) at the bottom of the Layers panel. Then create a selection of the object or area you want to clean up, creating the most accurate selection possible that contains the entire area you want to clean up but as few extraneous pixels as possible.

Next, choose Edit > Fill from the menu. In the Fill dialog box set the Use popup in the Contents section to Content-Aware. Make sure the

Cross-Platform 64-bit

Macintosh users may have felt a little left out with the release of Photoshop CS4, since only Windows users were able to leverage the benefits of a 64-bit application with that version. With the release of Photoshop CS5, however, Macintosh users now have a 64-bit version of Photoshop.

What that means for photographers is that Photoshop is now able to access a much larger amount of memory (RAM), enabling you to work with larger image files. This can be a huge benefit to photographers who are producing large composite images such as montages or panoramas. It can also benefit those who produce high dynamic range (HDR) images.

In short, if you've been tempted to utilize the full power of a computer with a significant amount of memory, Photoshop CS5 now enables you to take full advantage of that power regardless of what platform you're using.

Mode is set to Normal and the Opacity is set to 100%. Then click OK, and Photoshop will process the results. Note that the process of rendering the final result is not exactly fast, even with low-resolution images on a fast computer.

Quite often I find the Content-Aware option for the Fill command results in far too much duplication of other areas of the image, making it very obvious that the image has been tampered with. This is especially true when you're working with a relatively large area of the image. The Content-Aware feature, whether used with the Spot Healing Brush or the Fill command, is best used in relatively small areas of the image. Again, it can be incredibly impressive when it works well, but very disappointing when it fails to produce a usable result.

Refine Mask Refinements

The Refine Mask and Refine Edge features are actually the same thing. The dialog for each is exactly the same, with all of the same controls, the only difference being the title bar of the dialog. Refine Mask is used to make adjustments to a layer mask, and Refine Edge is used to make adjustments to a selection. Since I always recommend creating a layer mask based on a selection rather than working on the image directly via a selection, in my mind you would never use Refine Edge. Instead, create a layer mask based on the selection and then choose the Refine Mask option from the Select menu (or click the Mask Edge button on the Masks panel).

The first thing I feel I should mention is that the Refine Mask feature has been significantly updated in Photoshop CS5, but it is still not as effective in my experience as third-party tools such as Mask Pro from onOne Software (www.ononesoftware.com). That said, Refine Mask is much improved, and considerably better than the Extract filter that had been included previously with Photoshop.

In the View Mode section of the Refine Mask dialog you can choose the preview style you prefer from the popup. I generally prefer the On Layers option so I can preview the final result. You can also turn on the Show Radius checkbox to reveal only the portion of the image being evaluated by Photoshop based on your current settings (with the rest of the image covered with black), or the Show Original checkbox to see the image before any refinement to the mask was applied.

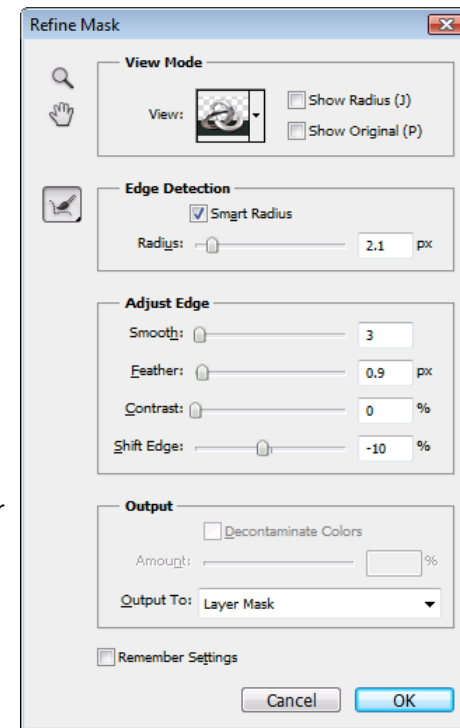
The next step is to adjust the Radius value, which determines how large an area will be evaluated in refining the mask. For relatively crisp edges you would use a low value, whereas for "fuzzy" edges (the types of edges you're most likely to employ Refine Mask for anyway) you would want to use a relatively high radius. The actual value will depend upon

how fuzzy the object really is, and the resolution of the image. In general I find for fuzzy subjects a value of around 15 to 20 pixels usually works well. Then turn on the Smart Radius checkbox so the radius will be adjusted automatically based on the relative contrast at various points along the edge of your layer mask.

You can then use the controls in the Adjust Edge to further fine-tune the edge of your layer mask. Increasing the Smooth slider will smooth out jagged edges along the layer mask. The Feather slider allows you to adjust the degree of softness along the edge, so you can prevent a "cutout" look when creating a composite image, for example. The Contrast slider is effectively the opposite of Feather, allowing you to tighten up a soft edge on the layer mask. Shift Edge allows you to expand or contract the relative size of the layer mask, effectively shifting the position of the layer mask inward or outward relative to the edge of the object you're trying to isolate with the layer mask.

To further clean up the result you're getting at this point, click on the Refine Radius Tool to the left of the Edge Detection section. Then paint over any areas you want Photoshop to evaluate for the mask. This would include particularly fuzzy areas that aren't coming out right, or areas that were masked by mistake. Note that this won't cause a change in areas that were already affected by your settings, but rather allows you to expand the area being evaluated. I find this most useful for situations where I want to use a small Radius setting for most of the image, but then need to paint in specific areas that are not included for evaluation based on that settings.

When you're finished with these refinements, you can make sure the Output To option is set to Layer Mask to replace the existing layer mask, and then click OK. However, there is also an additional option that can be helpful when working on a composite image. If you turn on the Decontaminate Colors checkbox and then adjust



The Refine Mask dialog allows you to fine-tune a layer mask with excellent control.

the Amount while evaluating the preview image, you can remove color fringing along the edge of the image so it will better blend in with its new background.

In addition, you can turn on the Remember Settings checkbox so the settings you establish will be the default for future images you work on with the Refine Mask command. This is particularly helpful if you tend to work on the same type of images (such as portraits), where similar settings would likely be used for most images.

Lens Correction Filter

The first thing you might notice if you go looking for the Lens Correction filter is that it seems to be missing. Actually, it has only been moved to put it in a more accessible location. Instead of being “buried” on the Filter > Distort menu (which always felt like you were going to create rather than solve problems with the image) the Lens Correction filter is now placed near the top of the Filter menu. So you simply choose Filter > Lens Correction to get started.

The next thing you’ll likely notice about the Lens Correction filter is that all of the controls you’re familiar with seem to have disappeared. Don’t worry, all of the controls are still available, but the fact that they’re not visible at first hints at the incredible power the Lens Correction filter now offers. Instead of requiring you to manually apply adjustments to correct for lens distortion, Photoshop can apply the corrections automatically. And this isn’t the sort of automatic adjustment you need to worry about, where Photoshop tries to “guess” at what adjustments should be applied. Rather, the adjustments are based on (when available) a profile specific to the lens that was used to capture the image.

One of the things I actually appreciate most about the updates to the Lens Correction filter is that the grid is now turned off by default, and the default size is considerably larger. There’s no question the grid can be invaluable in refining the adjustments you apply with Lens Correction, but a tiny grid immediately displayed over the image was always, at least to me, a bit distracting. If you make any changes to the settings for the grid, they are “sticky”, which means the settings you select will remain in effect until you make changes to those settings again.

The Lens Correction filter will attempt to determine which lens was used to capture the image based on metadata values, but if the lens shown in the Lens Profiles section (which also reflects a camera model, which is really more related to the size of the imaging sensor used) doesn’t match the correct lens, you can also set search criteria using the available pop-up menus. If you still don’t find the right lens, you can click the Search Online button to go to Adobe’s

website. There you can search the available profiles, or even download the profile creator and build your own (which you can then share through this online service).

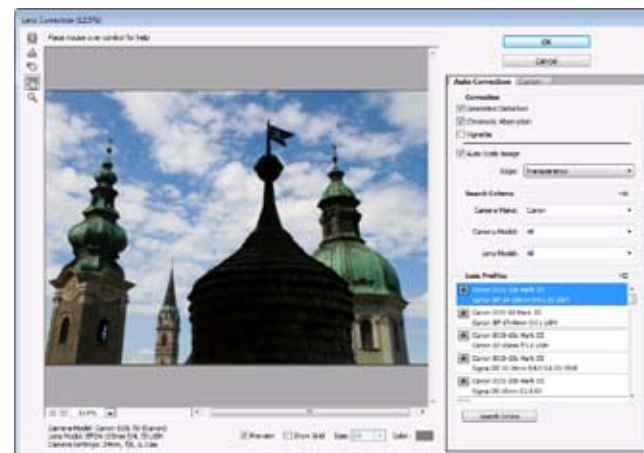
Once the correct lens is selected, you can enable the desired options in the Correction section at the top-right of the dialog.

In most cases you’ll want to leave the Geometric Distortion checkbox turned on, as that’s probably why you would use Lens Correction in the first place. This will correct for the distortion caused by curvature imposed on the light waves traveling through the lens, which is most commonly needed for wide-angle lenses.

If there is any chromatic aberration present (generally seen as colored halos along high-contrast edges in the image) you can turn on the Chromatic Aberration checkbox to have Lens Correction attempt to fix the problem automatically. The Vignette checkbox will obviously correct for light falloff at the edges of the frame.

The Auto Scale Image checkbox is also a new feature, allowing the image to be automatically scaled (think of this as cropping, effectively) to eliminate any “empty” areas from the image. For example, if the edges of the image get bowed inward to correct for distortion caused by the lens, you’ll need to either crop the image (which is what Auto Scale Image will do for you automatically) or choose an option from the Edge popup to decide what should be done about these areas. Two options are the same as were available in prior versions: Edge Extension (which attempts to extend the image by adding pixels similar to those near the edges), and Transparency (which leaves transparent pixels in those areas). Now, instead of the Background Color option you’ll find two new options that allow you to fill with Black Color or White Color.

In most cases the automatic adjustments work very well, especially when a lens profile is available for the specific lens that was used to capture the image. However, the manual controls from prior versions



The Lens Correction filter has been significantly updated, providing automated adjustments as well as enhanced manual controls.

of Lens Correction are still available. You can use the tools at the top-left of the dialog to access these controls, or click the Custom tab to access the full complement of controls directly. Note also that the Chromatic Aberration sliders are now more precise (fractional numbers now are allowed, rather than whole numbers), and there is now a Green/Magenta slider to make it easier to deal with the common “purple fringe” issue caused by chromatic aberration.

The updates to the Lens Correction may seem simple, but they’re actually quite significant in terms of efficiency and quality of results. Especially if you tend to work with shorter focal length lenses (particularly less than 50mm on a digital SLR), you’ll likely find the improvements to Lens Correction particularly valuable.

If after working with the updated Lens Correction filter you find it to perform well with the automatic settings, you can even batch-process multiple images. Simply choose File > Automate > Lens Correction from the menu. In the Lens Correction dialog that appears, choose Files or Folder from the popup and click Browse to select the images that should be processed (or click the Add Open Files button if you already have the images you want adjusted open in Photoshop).

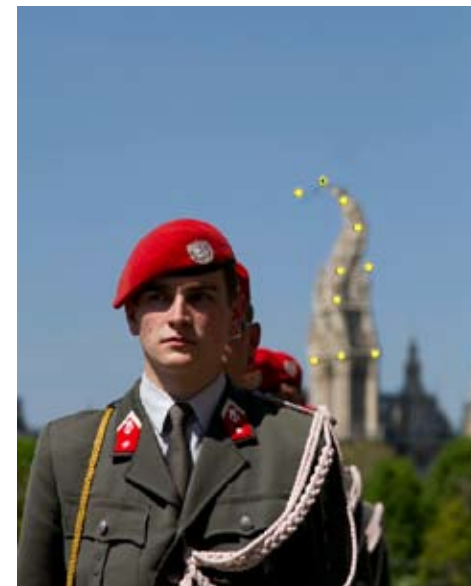
Specify the file format you want to use (JPG, PNG, PSD, or TIFF), and click Choose to specify a destination folder. Then turn on the Match Best Profile option for automated processing, or turn it off and click Choose to select a specific profile (which means all images will be processed with the same profile, and thus should have been captured with the same camera and lens). Finally, choose the desired settings in the Correction Options section and click OK to process your images.

Puppet Warp

The new Puppet Warp feature is one of those that is absolutely amazing but not likely to be put to use all that often by most photographers. This feature allows you to warp areas of an image to your whim. For example, imagine a photo of a flower with a straight stem, and being able to warp the stem of that flower to form an S-curve.

The trick is, you really need to be working with an object on a separate image layer in order to make full use of the Puppet Warp feature. In the case of a “normal” photographic image containing an object you want to warp, that means you need to first create a layer that only contains that object, duplicating pixels from the underlying image layer. You would then need to use the Clone Stamp, Healing Brush, or other tools (including the content-aware fill option) to remove the object from the underlying layer, so that when you warp the object you aren’t simply revealing portions of that object in the underlying image.

The odds are extremely high that if you see the Puppet Warp feature demonstrated the presenter will have already created an image that has a stand-alone object isolated on a separate layer floating above a background layer. At this point the user of Puppet Warp is simple. All you need to do is click on various points in the image to add handles, and then manipulate the position of those handles to change the shape of the object. It is amazing, but there is a fair amount of work that must go into setting things up in the first place. In other words, it is a feature that makes for a great demo, but one you’re not likely to put to much use in a typical photography workflow.



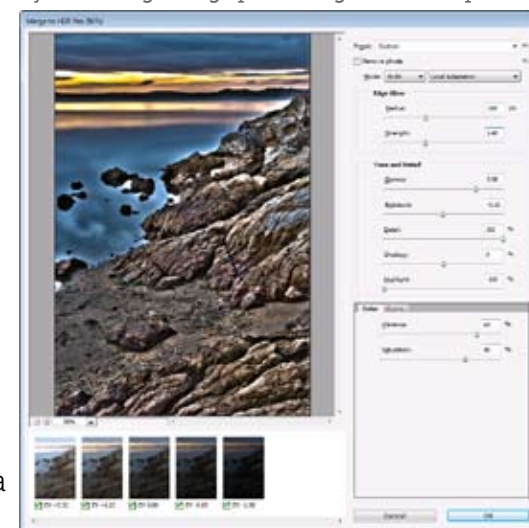
The Puppet Warp feature is quite remarkable, though perhaps not something photographers are likely to use regularly.

HDR Updates

I’m frankly not a big fan of high dynamic range (HDR) imaging. In most cases the result looks too artificial, and I tend to not find the effect all that pleasing. But HDR has become very popular. In Photoshop CS5 I finally feel that (for those who appreciate HDR imaging) Photoshop can finally be considered a solid tool for creating these images.

HDR Pro represents a significant improvement in high dynamic range image processing in Photoshop.

The new HDR Pro feature include in Photoshop CS5 is quite impressive. The default settings enable a much more realistic result than was possible with Photoshop CS4, and there are many presets to create a wide variety of stylized HDR



effects. These presets adjust the various controls available in HDR Pro, including tonal adjustments that include Shadow, Highlight, and Gamma, a Saturation control, and individual controls that allow you to adjust the level of detail and strength and size of the glow effect common in stylized HDR images.

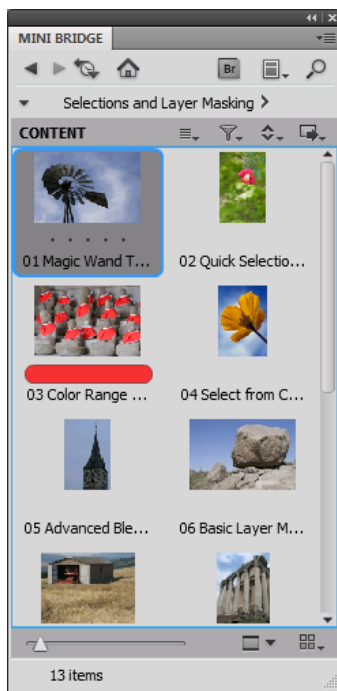
In addition, the new Image > Adjustments > HDR Toning command allows you to apply similar adjustments to existing images, using all the same controls found in HDR Pro.

Mini Bridge

There have certainly been some updates to Bridge, and they are reasonably noteworthy, but what is more significant from my perspective is the new Mini Bridge panel in Photoshop.

The Mini Bridge panel is accessible by choosing Window > Extensions > Mini Bridge from the menu, or by clicking the “Mb” button on the application bar in Photoshop. In either case, you’ll be presented with a small representation of the images that are currently available within the full Adobe Bridge application. As such, Bridge must be running in order to display images within Mini Bridge. But the Mini Bridge panel is very helpful when you’re working with a series of images contained in the same folder. Simply navigate to the desired folder within Mini Bridge or the full Bridge application, and you can then open individual files with incredible ease simply by using the Mini Bridge panel.

You can also apply filters to the images being displayed in Mini Bridge by using the various controls at the top of the Content section. You can also change the presentation of your images (for example, thumbnails versus details) using the control at the bottom-right of Mini Bridge.



The new Mini Bridge panel serves as a convenient portal to images you want to browse and open in Photoshop.

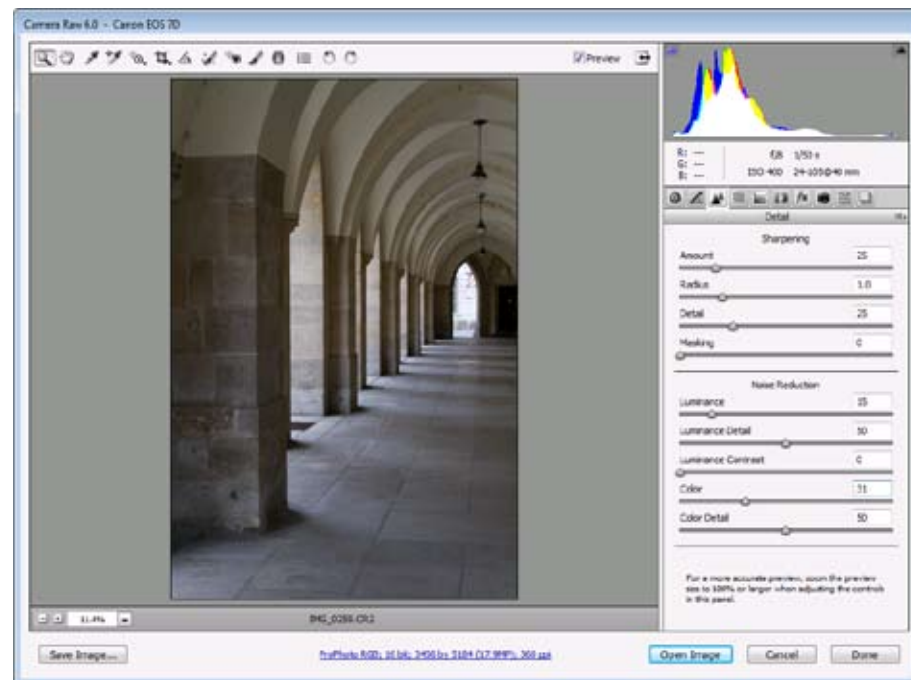
Adobe Camera Raw Update

Adobe Camera Raw has been updated somewhat significantly. The issue I believe is important to keep in mind is that now that Lightroom depends upon Adobe Camera Raw to ensure a smooth and effective workflow. As a result, Adobe Camera Raw must remain in lockstep with Lightroom. In other words, whatever improvements have been made available through the Develop module in Lightroom are now available through Adobe Camera Raw in Photoshop.

This includes significant improvements to the noise reduction capabilities of Adobe Camera Raw. It also includes the ability to add simulated film grain to your images. This might seem like a silly feature from the perspective of a digital photographer trying to minimize the appearance of noise in their photos, but many photographers still want to be able to simulate the organic appearance of film grain, and that is now possible with Adobe Camera Raw.

I’ve always seen Adobe Camera Raw as merely a convenient way to get my RAW captures into Photoshop. But one area where I’m actually now very impressed with Adobe Camera Raw is in the area of noise reduction. Both luminance and color noise reduction have

Adobe Camera Raw has been updated significantly, and one of the improvements I’m most pleased with is the updated algorithms for noise reduction.



been significantly improved, and the result is noise reduction I can actually recommend. In prior versions I would suggest that if you need noise reduction you should purchase a third-party product. With the new improvements in Adobe Camera Raw I can now recommend using the noise reduction capabilities found there instead of a third-party solution.

I realize this next “improvement” may not seem like an improvement at all to many photographers. But Adobe Camera Raw also now allows you to add a film grain effect to an image. This allows you to control the amount of film grain being added, as well as the size and roughness of the effect. While I consider this to be a feature that should only be used sparingly, it is a very good effect. In fact, it is considerably better than any other option available within Photoshop. It offers greater control than the Film Grain filter available in Photoshop, and better results than can be achieved with a variation on the use of the Add Noise filter.

For those who are fond of vignette effects (and even those eager to eliminate vignetting caused by the lens), the Post Crop Vignetting improvements will be welcomed. Of course, I prefer not to crop at all within Camera Raw, so I don't see this as a significant benefit. However, the new options are rather impressive.

In addition to the controls that were previously available, there is now a Style popup for Post Crop Vignetting, which is now in the Effects section of Camera Raw rather than the Lens Corrections section. The Highlight Priority option will preserve details in bright highlights. This produces, in my opinion, a much more pleasing look for particularly bright areas that are being affected by the vignette, as it prevents the muddy appearance that can be common in such situations. The Color Priority option will help ensure the appearance of colors is retained, so they aren't shifted toward more neutral values. With both of these options you can also utilize the Highlights slider (though only if you're applying a darkening rather than lightening effect with the Amount slider). The Paint Overlay option produces an effect similar to what would be achieved with prior versions.

What About Extended?

While both the Standard and Extended editions of Photoshop have been updated with the CS5 release, the focus of the Extended edition remains on scientific and 3D applications. As a result, there's really no need for the vast majority of photographers to spend the extra money for the Extended edition.

Naturally if you're involved in photography from a scientific perspective, or if you also work with 3D modeling, you may want to consider the Extended edition. But for typical photography applications the Standard edition will more than meet your needs.

New Feature Grab Bag

When it comes to new features of interest to photographers, there are a handful of features that seem very big. Those are the features likely to get the most attention, though frankly I do wonder whether that attention is deserved. On balance, it seems to me that the greatest value for photographers when it comes to Photoshop CS5 is the relatively long list of minor updates that don't seem significant and yet make a big difference in the photographer's workflow.

A discussion of Photoshop CS5 wouldn't be complete without coverage of the many relatively minor new features that are of interest to photographers. So, without further ado, I'll outline those features.

The Crop tool finally includes the ability to display a grid over the image that represents the rule of thirds. You can also turn off the grid, or set it to a true “grid” display that provides a more accurate display for aligning horizontal or vertical lines within the image as you apply rotation. To enable this feature, first draw your basic crop (so the controls on the Options bar will change to reflect those available while you're defining the crop) and choose the desired option from the Crop Guide Overlay popup. The options are “None”, “Rule of Thirds”, and “Grid”.

There are a couple of new “head-up display” (HUD) options that I find very helpful. First, if you use the Eyedropper tool to select a color from within the image (which I do regularly when I need to apply a color correction in another area of the image, for example), you can now see an on-screen display that can be very helpful. There are two concentric rings. The outer ring is middle gray, helping to reduce the influence of other colors on your perception of the colors you're picking. The lower half of the inner ring shows the current color that is already selected, and the upper half displays the color your mouse is currently hovering over. This makes it easy to instantly get a sense of the color you'll select if you click the mouse, and also to compare that

The new Rule of Thirds and Grid displays for the Crop tool are an example of small features that can make a big difference in your workflow.



color to the existing color. I find this extremely helpful when I've picked the wrong color and need to find a slightly different color. For example, if I need a shade of orange and the color I initially picked is too red, this display makes it easy to evaluate colors since you can see very clearly how the color you're about to choose differs from the previously selected color.

The HUD color picker is another nice addition, though one that is complicated to explain. To view this color picker, you hold the Shift and Alt keys and then hold the right mouse button on Windows (hold Command, Option, and Control keys and then hold the left mouse button on Macintosh). Once you've clicked you can release the keys on the keyboard but you must continue to hold the mouse button down. Then simply drag the mouse around to select a color. The larger area at the left allows you to adjust the saturation and brightness, and the vertical gradient on the right allows you to adjust the hue. If you would like to lock the current position of the control so you can move your mouse over to the other (for example, so you can move over to the saturation/brightness control after selecting a huge), simply hold the Spacebar key. While holding the Spacebar the controls are locked, and you can release the Spacebar again to further refine the currently selected color. A ring around the mouse pointer shows the previously selected color on the top and middle gray on the bottom.

One new feature I'm not particularly fond of (which in fairness may very well mean I just haven't gotten used to it yet) is the new behavior when dragging with the Zoom tool. Instead of dragging to draw a marquee over the area you want to get a closer look at, now the Zoom tool allows you to smoothly zoom in or out by dragging. Simply drag left to zoom out or right to zoom in. This works regardless of whether Zoom tool is active or if you are accessing it temporarily by holding the Z key or the Ctrl+Spacebar shortcut (Command+Spacebar on Macintosh). Since this feature makes use



The HUD display for the Eyedropper tool and related HUD color picker provide useful efficiency when selecting colors.

of OpenGL Drawing, you can disable this feature in order to return to the "old" behavior by turning off the Enable OpenGL Drawing checkbox on the Performance tab of the Preferences dialog. Of course, doing so will also disable other features that make use of OpenGL, including the very cool HUD color picker and the on-image preview for the Eyedropper tool.

There are also a variety of relatively small (in some cases tiny) and yet meaningful improvements. I think of these as being some of those nice refinements that provide a more pleasing user experience and in some cases greater workflow efficiency, but they're not exactly features that will make you rush out to buy the upgrade. These include:

- A Straighten button on the Options bar for the Ruler tool, so that once you've measured a line that should be perfectly horizontal or vertical you can apply an automatic straightening (rotation and cropping) of the image without the need to then rotate and crop as separate steps.
- There is a script that can automatically remove all layers that don't contain any pixels, found on the menu at File > Scripts > Delete All Empty Layers.
- You can save a 16-bit per channel image directly to an 8-bit per channel JPEG without the need to convert to the 8-bit per channel mode manually.
- If you choose the "Don't Ask Again" option when prompted about the Maximize Compatibility option for saving Photoshop PSD files, the setting you've established will automatically update the setting in Preferences so that option will be used for all PSD files moving forward.
- There is now an Apply to All checkbox in the dialog that prompts whether you want to save changes when you choose File > Close All from the menu. Turning on this checkbox enables you to choose the option not to save changes, and have all open images closed immediately.
- A "Save As to Original Folder" option has been added to the File Handling section of the Preferences dialog. With this option turned on, whenever you choose the File > Save As command from the menu, the default folder will be the folder the current image was last saved in.
- You can select multiple layers on the Layers panel (click on the first layer you want to select and then hold Shift and click on the last layer in the range of layers you want to select), and then adjust the Opacity control at the top-right of the Layers panel to adjust the Opacity for all of the selected layers at once.

- Each page of the Layer Style dialog now has a Make Default button so you can establish your own personalized default settings for each effect. There is also a Reset to Default button that will return all of the settings for the current effect to the defaults you have saved.
- You can now include print settings as part of actions, helping enable automated print workflows that don't sacrifice color accuracy or workflow efficiency.
- The layer groups feature (covered in great detail in a separate article in this issue) now allows you to nest up to ten layer groups deep rather than only five. However, keep in mind this can introduce a compatibility problem if you share files that contain nested layer groups with other users who have not upgraded to Photoshop CS5.
- The Gradient tool now includes a Neutral Density preset that allows you to apply a gradient darkening effect to an image quickly, for example to darken a bright sky to better match the overall scene. This is handy, though I personally prefer to customize the effect a bit more, generally using a standard gradient layer mask with an adjustment layer (such as Curves) used to darken the image. If you do make use of this new Neutral Density preset, I suggest adding a new empty layer above your image layer(s) first and add the gradient to that new empty layer.
- If you drag an image into Photoshop CS5 with an existing image open, the image you drag will become a layer in the existing document, rather than being opened as a separate file. This can either be a good thing or a bad thing depending on your personal workflow style and preferences.
- You can force a text field to have the focus on the Adjustments panel by pressing Shift+Enter (Shift+Return on Macintosh). This allows you to then type a value manually, press the up or down arrow keys to increase or decrease a value (adding Shift to adjust by a factor of ten), and navigate among the fields by pressing Tab to move forward or Shift+Tab to move backward.
- Really intended for those who are truly creating virtual paintings in Photoshop, but useful in some cases for photographers, the painting engine has been greatly improved. A new Mixer Brush tool is available, and many new options are also available for dealing with how the brush tools and the virtual "paint" you draw with behave.

The \$199 Question

Before I hear questions about the new features in the latest version of Photoshop, I hear the standard question: Is it worth the upgrade price? This is actually a very difficult question to answer. I almost always think photographers should upgrade to the latest version of Photoshop. I feel it is valuable to stay current on the latest features, there tends to be an advantage in terms of bugs from prior versions being fixed, and it helps avoid potential compatibility problems (such as the inability to upgrade to the latest version of Adobe Camera Raw if you're not using the latest version of Photoshop).

With Photoshop CS5 it is a bit more challenging because there are basically two categories of new features. The first category is what I think of as the "big" new features that have some cool potential but aren't always as good as we would hope. This is the category that would cause me to hesitate a little on the upgrade question. The second category is the large number of small features. This is actually the category that I think tips the scales in favor of upgrading. If you look at each of these updates and new features individually, they likely wouldn't inspire you to upgrade. But when taken as a whole, they represent many small updates that make a big difference in how you work in Photoshop.

I realize this is a \$199 question, but taken in context with all the other things photographers spend money on, I still think the upgrade price still represents a good value. >>

Group Benefits

BY TIM GREY

I still find it surprising how often I present some of the features of layer groups in Photoshop, only to find that quite a few photographers in the audience never knew this feature existed even though it has been around since Photoshop 7, which was released in 2002 (yes, it really has been that long). I suppose I really shouldn't be surprised that many photographers aren't familiar with the layer group feature, since Photoshop is such an incredibly complex (and powerful) application, and this is a feature that doesn't really get discussed all that often.

In my mind, what all that really means is that layer groups may be one of the "best kept secrets" in all of Photoshop. In a variety of ways, layer groups allow you to be more organized with your images, and to apply powerful adjustments in a very flexible and efficient way.

Organizational Tool

Layer groups (they were actually called "layer sets" when first released in Photoshop 7, but re-branded in Photoshop CS) were originally designed as an organizational tool. As you probably realized long ago, it is quite easy to end up with a particularly large number of layers in Photoshop, and sometimes that can cause you to feel a little overwhelmed. This is especially the case for more complex images that include multiple image layers (such as with a montage, for example), and perhaps various text layers, adjustment layers, and other layers that can quickly clutter up the Layers panel.

A layer group is, quite simply, a virtual folder on the Layers panel that allows you to divide various layers into logical groups, helping you to stay more organized. But layer groups also unlock some additional capabilities that are, in my opinion, quite remarkable from the standpoint of an advanced image-optimization workflow.

Creating a Layer Group

To get a feel for the concept of layer groups, I think it is best to dive right in and work with layer groups on a test image file. While everything I'll guide you through in this article is non-destructive, I still recommend working with a copy of one of your images rather than an original, if for no other reason than as you explore the various options working with layer groups you may create a lot of clutter on the Layers panel you won't want to keep.

The fastest and easiest way to create a new layer group is to click on the Create a New Group layer (the folder icon) at the bottom of the Layers panel. When you do so, a new layer group will be created directly above the currently active layer (presumably the Background layer at this point) on the Layers panel.

The first layer group will be named Group 1 by default, with each new layer group you add receiving the next number in series (Group 2, Group 3, and so on). I highly recommend renaming your layer groups with something more meaningful, just to maximize the organizational benefit they provide. To rename the layer group, simply double-click on the name of the layer group on the Layers panel, type a new name, and press Enter/Return. I recommend naming the layer group based on the intended purpose. For example, if you're using the layer group to apply a set of adjustments that will only affect the sky, you could name the group "Sky Adjustment". The point is to use something meaningful so you'll know why the layer group is there when viewing the Layers panel.

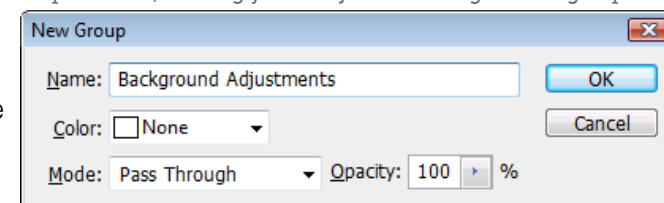
Since you're likely to rename the layer group anyway, it can also be helpful to provide a name at the time you actually create the group. As you would probably expect, there are several ways you can go about this. The easiest approach in my view is to simply hold the Alt key (Option key on Macintosh) while clicking the Create a New Group button at the bottom of the Layers panel. Doing so will cause the New Group dialog box to appear. The default name will appear in the Name field, but you can type a new name to assign to the layer group.

You can also assign a color to the group you're creating using the Color popup in the New Group dialog box. Simply choose one of the available options (including "None" if you don't want any color applied). The selected color will be used as shading for the "eye" icon to the left of the layer group on the Layers panel.

If you didn't assign a color when you first created the layer group, or you later decide you want to change (or remove) the color, you can do so by changing the properties for the layer group. Simply double-click in the empty area around the name for the layer group on the Layers panel. You

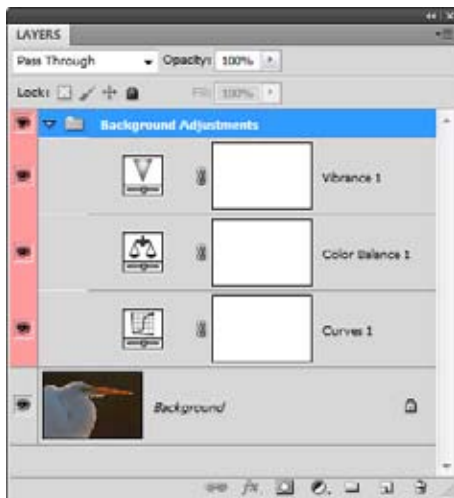
can also click the side menu button at the top-right corner of the Layers panel and choose Group Properties from the popup

If you hold the Alt (Windows) or Option (Macintosh) key while clicking the Create a New Group button, the New Group dialog will be presented, allowing you to adjust the settings for the group.



menu or choose Layer > Group Properties from the main menu bar in Photoshop. Any of these options will bring up the Group Properties dialog box, where you can choose a different color (or “None”) from the Color popup. You can also modify the name for the layer group in this dialog box.

Of less interest in the Group Properties dialog box are the Channels checkboxes. By default all three of these channels (R, G, and B, for red, green, and blue, respectively) are turned on, and in the vast majority of cases that’s exactly what you want. If for some reason (such as a unique creative effect or serious color correction issue) you want the items contained within the layer group to only affect specific channels, you can turn off the checkbox for the channels you don’t want to affect. Once you’ve adjusted the properties for the layer group, click OK to close the Group Properties dialog box.



If you assign a color to a layer group, the color will appear to the left of the layer group on the Layers panel.

Working with a Layer Group

The whole purpose of a layer group, of course, is to actually put something inside of that layer group. In the context of an image-optimization workflow, that means adjustment layers and image layers. I’ll talk more about the particulars of doing so, but for now let’s assume we want to organize a set of adjustment layers that are affecting the entire image. We’ll further assume for the moment that you created the adjustment layers before you decided to organize them into a layer group. As a result, those adjustment layers are on par with the layer group, not contained within the layer group.

To place a layer (whether it is an adjustment layer or an image layer) inside a layer group, simply point to the layer you want to place inside the layer group and then drag and drop the thumbnail for that layer onto the folder icon for the layer group. This will cause the layer to be placed inside the layer group, as indicated by the fact that the layer will then be below the layer group and indented slightly. You can drag any other layers onto the thumbnail for the layer group, and they will also be placed inside the layer group.

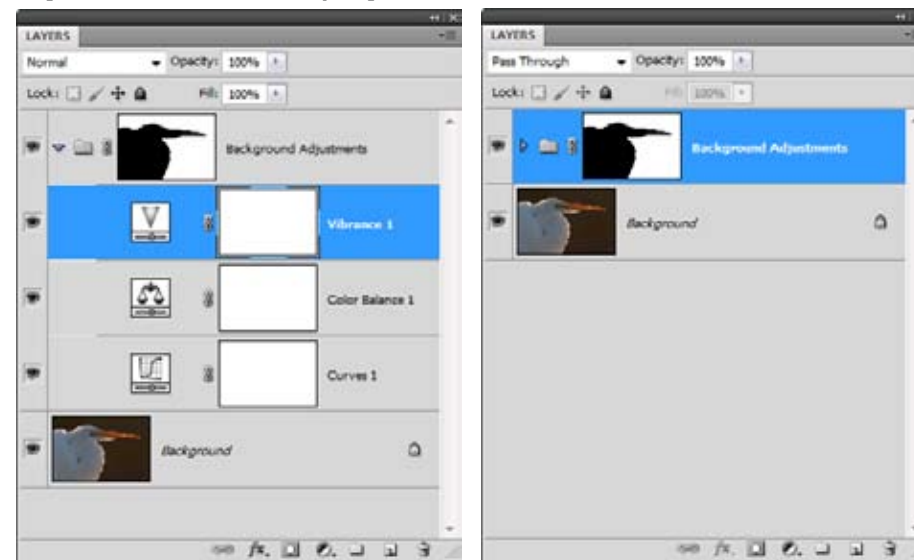
As I mentioned at the beginning of this article, layer groups were originally added to Photoshop in large part to provide some organization for the Layers panel. At this point adding a layer group has only served to make the Layers panel more complex, by virtue of the fact that there’s simply another “layer” on the list shown there. However, you can collapse layer groups to hide their contents, which provides an excellent solution for a variety of situations.

To collapse a layer group simply click on the triangle icon to the left of the folder icon for the layer group on the Layers panel. This triangle serves as a toggle, meaning it will collapse or expand the layer group depending on the current state of that layer group when you click on it. When a layer group is collapsed the contents will be hidden, helping to reduce the amount of clutter on the Layers panel. And, of course, when you expand a layer group the contents will be revealed, all of which will appear indented below the layer group they are contained in.

At times you may find you need to drag a layer out of a layer group, which can actually be slightly challenging. When you have multiple layer groups and a series of layers both inside and outside the layer group it isn’t quite as challenging, but in many cases you’ll have only a Background image layer and a layer group with one or more layers inside that layer group, and you want to drag one or more layers out of the layer group.

The key to dragging a layer out of a layer group has to do with precise positioning of your mouse before releasing the mouse button.

Collapsing a layer group temporarily hides the layers contained within the group, which can help remove clutter from the Layers panel.



You need to pay close attention to the indicators on the Layers panel when performing this task. What you want to see is a horizontal bar spanning the width of the Layers panel in the position you want to place the layer you are removing from a layer group. For example, if you have only a Background image layer and a layer group containing one or more layers, you may want to drag an adjustment layer outside the layer group. That will generally involve dragging the adjustment layer to a position above the layer group on the Layers panel. Therefore, you would click on the thumbnail for the appropriate adjustment layer, and then click and drag toward the top of the Layers panel. If you drag too high you'll see a hand icon for your mouse pointer without any other indication. In the correct position, you'll see a horizontal bar between the top-most layer on the Layers panel and the top of the space dedicated to layers. If you drag too low, you'll likely see a box indicating that the layer will be placed into the layer group. Even lower and you'll see the "circle with a slash" icon that indicates you can't drop the layer in that position (for example, directly onto the Background image layer).

Naturally, if you decide later you want to put a particular layer back inside a layer group, you can simply drag the thumbnail for that layer to the thumbnail for the appropriate layer group.

Automatic Grouping

From time to time you may run into a situation where you decide after creating a group of layers that you'd like those layers to be placed into a layer group, but you haven't yet created a layer group to contain those layers. This is especially true for situations where you decide you want to create multiple interpretations of an image, as I'll explain in the next section.

The first step in automatically adding multiple layers (or even a single layer) into a layer group is to select those layers. Start by clicking the first layer and then holding the Shift key and clicking on the last layer. This will select all of the layers in between the first and last you clicked, so they are all ready to be added to a new layer group.

By the way, unfortunately there isn't a way to select layers that are not contiguous on the Layers panel. So for example, if there are four layers in a row and you don't want one of the "in between" layers to be included in a layer group, you can't select all but that one in between layer. You would need to manually drag some or all of the layers into or out of the layer group after creating that layer group.

The next step is to create a new layer group. Because you already have one or more layers selected on the Layers panel, you can have those layers automatically added to the new layer group when it is

created. To do so hold the Ctrl key (Command key on Macintosh) and press G to create a new group. A new layer group will be created, and the layers you had selected will automatically be placed inside that layer group. The new layer group will also be collapsed by default, so the clutter on the Layers panel will be immediately reduced. You can produce the same effect, by the way, by dragging the thumbnail for any of the currently selected layers to the Create a New Group (the folder icon) at the bottom of the Layers panel.

As an alternative to the keyboard options presented above, you also have a couple of menu options you can use to create a new layer group after you have selected the layers to be placed within that layer group. From the side menu on the Layers panel you can choose New Group From Layers, or you can choose Layer > New > Group From Layers from the main menu. For both of these options the New Group From Layers dialog box will be presented. This dialog box is an exact copy of the New Group dialog box discussed previously, with the only difference being the title of the dialog box.

Ungrouping Layers

If at any time you decide you want to remove a layer group without losing the contents of that layer group, you can simply ungroup the contents and retain them in their current location (outside of the layer group you're removing, of course).

To ungroup the contents of a layer group, first click on the icon for that layer group on the Layers panel. Then choose Layer > Ungroup Layers from the menu, or hold Ctrl+Shift (Command+Shift on Macintosh) and press G on the keyboard. The layer group will be removed, and all contents of that layer group will be left behind in the position that had been previously held by the layer group.

Version Control

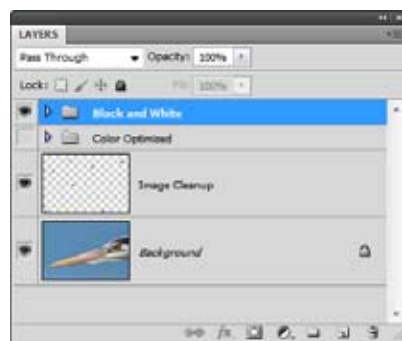
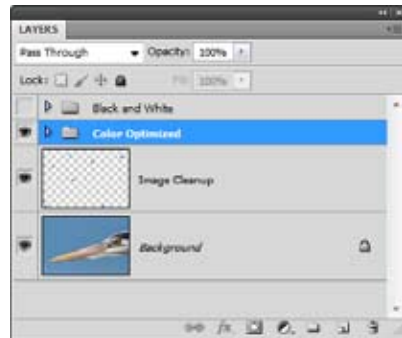
At this point you have a strong foundation for the functionality of layer groups. However, that knowledge doesn't necessarily provide you with the ability to put layer groups to use in a real-world workflow, other than potentially cleaning up what could become a very cluttered Layers panel for certain images.

One of the most basic ways to leverage layer groups is to include multiple versions of an image within a single master image file. For example, you might create both a color and black & white version of an image, and utilize the same multi-layered Photoshop PSD file to contain both versions rather than having to manage individual files for each interpretation of the image. This is also a great way to enable more experimentation with your images as you determine how you want that image presented.

The chances are good that you tend to approach an image with a single vision in mind, and then later through the process of optimizing that image you decide you'd like to explore a different interpretation of the image. The initial adjustments you've applied are therefore not likely to be contained within a layer group, so the first step is to create a new layer group that contains all of the adjustments you've applied, as discussed earlier in this article. It is a good idea to name this layer with a brief description of the adjustments you've applied, which will make it easier to switch between different versions or fine-tune your adjustments later.

Once you've created a layer group that contains the adjustments you've applied, you could start creating new adjustments in a new layer group by simply creating a new group and placing additional adjustment layers in that group. Be aware, however, that a new layer group will be placed inside a current layer group (just as a new adjustment layer would) if the layer group is expanded and selected, or if a layer inside the layer group is selected. To ensure the new layer group is placed outside the existing layer group, first collapse the existing layer group. This will cause a layer group (or any other new image or adjustment layer) to be placed above the current layer group, and not contained within that existing layer group.

One of the key benefits of layer groups is the ability to create different interpretations of an image within the same image file.



In many cases you may find the existing adjustments you've applied represent a good starting point for creating a different interpretation for your image. For example, instead of making a dramatically different version you may simply want to have two versions where you use the same adjustments but with slightly different settings. In such a case it may be helpful to start from a duplicate copy of the original layer group. To create a copy, first select the layer group on the Layers panel, and then choose Layer > Duplicate Group from the menu. This will bring up the Duplicate Group dialog box, where you can enter a name for the new layer group in the As field. It is also possible to duplicate the group to a different document (which can be helpful for applying the same adjustments to different images), including to a new document, but in this context you'll want to duplicate the layer group within the same document. After entering a name that is meaningful with reference to the final appearance you intend for this image, click OK.

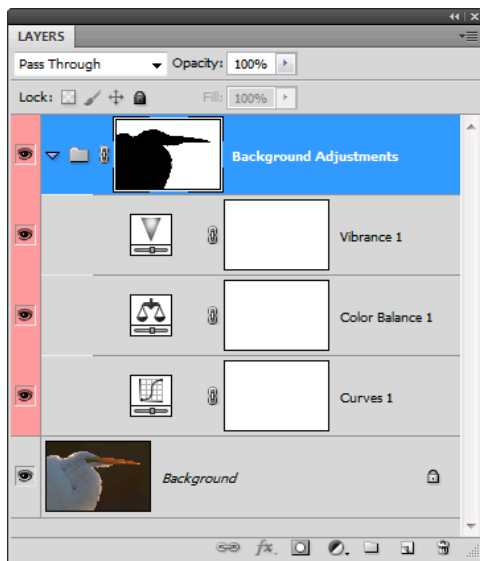
You can also duplicate a layer group by dragging the thumbnail for that layer group to the Create a New Layer button (the blank sheet of paper icon) at the bottom of the Layers panel. This will create a copy of the layer group, with the word "copy" appended. You can change the name to something more meaningful by simply double-clicking on the name for the new layer group, typing a new name, and pressing Enter/Return.

Once you've created a copy of the original layer group, you'll likely notice a dramatic change in the appearance of the image, because the same adjustments are now being applied twice to the image. The key to using this approach to contain multiple adjustment versions of your image within the same document is to only have one of the layer groups visible at any given time. To toggle the visibility off or on for any layer group, simply click the eye icon to the left of the thumbnail for the layer group. You can then turn off all but the one layer group containing the adjustments you want to work with.

It is important to keep in mind not only that you need to make sure the appropriate layer group is visible with others turned off, but also that you need to be careful to ensure you are working with the correct adjustment layer within the correct layer group whenever you're fine-tuning the image. While adding layer groups in this manner can greatly improve your flexibility and organization, it also adds a certain level of complexity. The key is to pay attention to which group and layers you're working with, and taking your time to ensure you're achieving the intended result.

Layer Masks

By far the most important reason to work with layer groups in my mind is the ability to utilize a layer mask with a layer group. Doing so allows you to use a single layer mask to constrain multiple adjustment layers so they only affect a single area of the image. The alternative is to use individual layer masks with individual adjustment layers. But if those adjustment layers are all intended to apply to the same area of the image, if you later discover the layer mask isn't quite perfect you need to fix the multiple layer masks associated with the multiple adjustment layers.



When you attach a layer mask to a layer group, all of the adjustments (or other layers) within the layer group will only affect the area defined by the layer mask.

To add an adjustment layer to an existing layer group, simply select the layer group on the Layers panel by clicking on its thumbnail and then click the Add Layer Mask button (the circle inside of a square icon) at the bottom of the Layers panel. If you want to use a selection as the basis of the layer mask, simply create the selection before adding the layer mask. With a selection active when you add a layer mask, that layer mask will automatically reflect the shape of the selection, so that the contents of the layer mask will only affect the area defined by the selection.

Once you've added a layer mask to a layer group, the entire contents of the layer group will only be visible based on the layer mask. The contents will be visible where the layer mask is white, hidden where the layer mask is black, and partially visible in areas where there are shades of gray on the layer mask. As such, you can paint on the layer mask to fine-tune where the contents of the layer group are visible or hidden.

Nesting Groups

To really maximize the power of layer groups, you can take advantage of the ability to nest one layer group inside of another. This provides a benefit both in terms of organizing multiple image layers as well as providing more advanced layer masking capabilities.

You've already learned how to use a single layer group with a collection of layers to help organize and de-clutter the Layers panel. In some cases you will find it helpful to utilize multiple layers of layer groups in order to further divide layers into groups and sub-groups. Admittedly, I don't find too many situations with a normal photographic image where I put this capability to use. Rather, I tend to use it when creating more complicated documents, such as website graphics or printed output that includes multiple images and text.

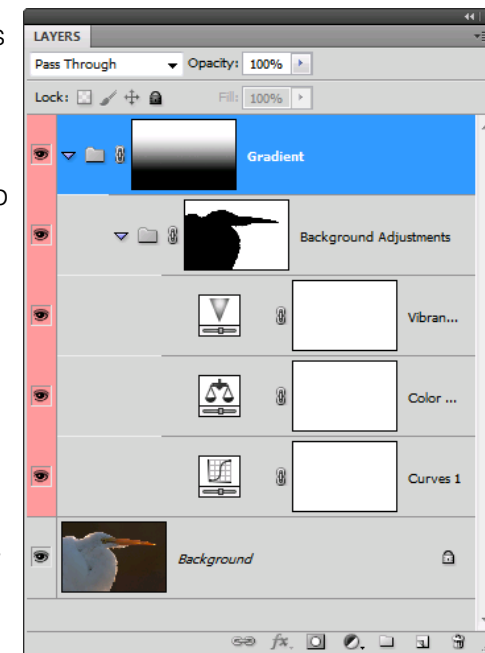
For example, when working with a complex montage image, I will create a layer group to contain all of the text layers, and another layer group to contain the image layers. However, I often find it helpful in these situations to also create sub-groups. For example, I'll divide text between title text for the printed page and captions for individual photos, with each set contained in a separate layer group and both of those layer groups placed into a "Text" layer group.

The process of creating multiple levels of layer group is very easy. Simply create the first group and place the desired layers within that layer group. Then create a new layer group and drag the first group into the second group. Just as you can tell when a layer is contained within a layer group by virtue of the fact that a contained layer is indented below the layer group.

You can actually nest layer groups up to ten deep in Photoshop CS5, which provides quite a bit of flexibility (and possibly more complexity than you want or need). In prior versions of Photoshop it was possible to nest layer groups up to five deep.

While I do find the nesting of layer groups helpful in certain situations for a purely organizational benefit, where they really come in handy is for using multiple layer masks with a single group of layers. As I discussed earlier in this article, it is beneficial to place a set of adjustment layers inside a layer group and then use a layer mask attached to that layer

By nesting layer groups you can cause more than one layer mask to constrain the behavior of a set of adjustment layers. In this case a set of adjustments are affecting only the background, but in a gradient fashion.



group to constrain the behavior of the adjustment layers based on the layer mask. By doing so you only have to refine one layer mask to change where all of the adjustment layers within a layer group have an effect, rather than adjusting layer masks for each of the individual adjustment layers.

However, by combining the ability to nest layer groups with the ability to add a layer mask to each of the layer groups, you can expand the power of your layer masking. The most common scenario for me is to apply a set of adjustments that only affect one area of the image (for example, the sky), and affect that area in a gradient fashion (for example, a stronger effect at the top of the sky than at the bottom). The solution is to first create a single layer group with a layer mask attached, and place your adjustments inside that layer group. You can then create another layer group and add a layer mask to that layer group. Then drag the first layer group that contains the adjustments and drop it on the second layer group. In effect this will cause a result as though both layer masks were blended together into one, constraining the adjustments so they are only visible in areas where both layer masks would cause them to be visible. Once you've created this structure you can then fine-tune either of the layer masks.

And, of course, you can still nest the layer groups up to ten deep (five deep with versions prior to Photoshop CS5) to create incredibly complex layer mask structures. I've actually never found a situation where I needed more than two layer masks used in this way, but it is nice to know there is additional power waiting for you if you need it.

Pass Through Blend Mode

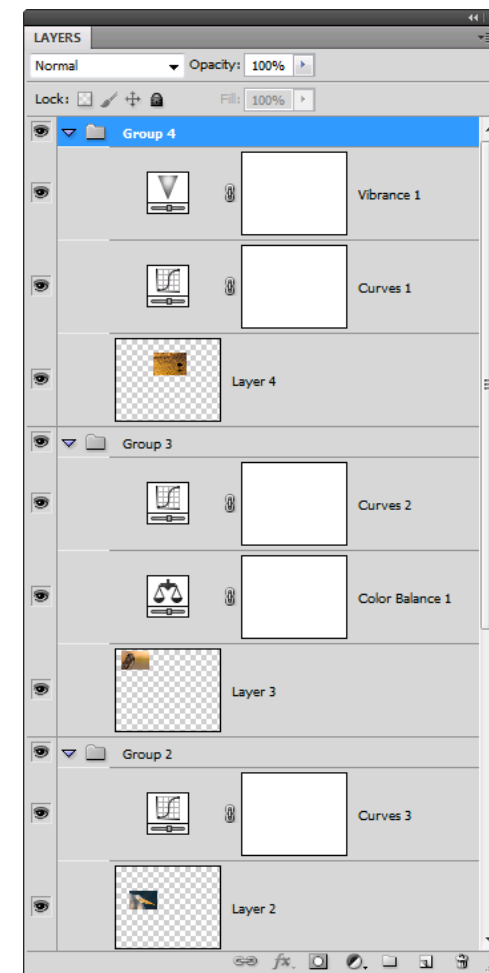
You may have noticed when working with the New Group dialog box or by looking at the blend mode popup at the top-left of the Layers panel that you can establish a blend mode for a layer group. The default blend mode is Pass Through, which can sort of be thought of as a blend mode that causes no interference at all. In other words, it makes the layers in the blend mode affect all layers below them, whether or not any other layers are inside or outside the current layer group. This makes sense in the context of using layer groups for organizational purposes, because in that case you really don't want the layer group to interfere with the various layers that comprise your overall image.

However, in certain situations you actually don't want the effect of the adjustment layers within a layer group to affect any layers outside that layer group. Good examples include a photo montage, where you want to apply specific adjustments to individual image layers

within the composition, or composite panoramic images where you need to apply individual layers to adjust them so they match perfectly with adjoining layers.

In such a case the solution is to create the individual layer groups, and then place image layers and adjustment layers within the layer group based on how you want to isolate those layers for adjustment. For example, with a composite panorama you would place a single frame of the overall panorama into each layer group, and add adjustment layers as needed to each of those layer groups in order to make the necessary adjustments. For a photo montage the same basic process would apply, except that you might want to place more than one image layer into a given layer group if you wanted to apply the same adjustments to certain image.

It is important to keep in mind that within the layer group the order of layers is still important. Specifically, image layers need to be placed below any and all adjustment layers so those adjustments will actually apply to the image layer. In other words, the behavior inside a layer group is the same as the layer you would expect without the use of layer groups for layers on the Layers panel, with the only real difference being that when layer groups are involved things can get a bit more complicated. However, that complication can greatly increase your efficiency, flexibility, and power in Photoshop, so they are well becoming familiar with. >>



The Normal blend mode will constrain the contents of a layer group so only the layers within that layer group are affected.

Upcoming...

Layout Updates

You may have noticed some slight changes to the layout for *Digital Darkroom Quarterly*. In particular, the “Letter from the Editor” page has been removed to provide more space for the informative content presented in each issue. Hopefully you find these updates helpful. Your feedback is certainly welcome as *Digital Darkroom Quarterly* continues to evolve and improve to better meet your needs.

Click! California Photo Festival

Tim Grey will be participating in the Click! California Photo Festival hosted by Light Photographic Workshops on the beautiful central coast of California. This event will be held September 21-26, 2010 with presentations in San Luis Obispo, Morro Bay, Paso Robles, Los Osos, Cayucos, San Simeon, and more. In addition to Tim Grey, other presenters will include Hanson Fong, Rob Sheppard, Jim DiVitali, Jack Davis, Jane Conner-Ziser, and many others. This is the first Click! event, and it promises to be a tremendous learning experience and a great deal of fun. For more information, or to register, visit the event website at www.californiaphotofest.com.

DVD Price Reduction

Tim Grey’s “Photoshop Hands-On” series of video tutorial DVDs have been praised as excellent learning tools for digital photographers working to master Photoshop. The current series was recorded using Photoshop CS4, but the vast majority of the content is still applicable to the new Photoshop CS5. However, in consideration for the fact that the new features of Photoshop CS5 are not covered on the existing DVDs, the price has been reduced to only \$20. This is a tremendous bargain, and you can take advantage of this new pricing by placing an order for any of the DVDs through Tim Grey’s online store at www.timgrey.com/store/.

In the Next Issue

The next issue of *Digital Darkroom Quarterly* will be the Summer 2010 issue, and it will be mailed in July 2010. Articles will include coverage of the latest version of Adobe Photoshop Lightroom, and much more.