DIGITAL DIRECTIONS Promises Promises: Grain Reduction and Image Sharpening

Original scan



Final Image



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 Code
 Photombag
 Pin Select Window Help

 Pin Select State
 Pin Select State

 Pin Select State
 Pin Select State

Using Rectangular Select tool







Using Image Smooth filter

Using Magix wand

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We all have grain problems! But now digital tools can ease the pain. Offer versatility to your photographers: Show them Before and After grain reduction images. They'll love the difference!

AS FORMER students of Brooks Institute of Photography in Santa Barbara, CA, we fondly remember some of the jokes played on underclassmen. The advanced students teased incoming students, promising them good grades by offering bottles of film grain reducer and jars of image-sharpening fluid. Of course, we never fell for the trick (or at least not more than once). With all the

digital technology available today, solutions to these problems are no longer a joke.

Most of the image editing software programs on the market now offer image sharpening and grain reduction. You can sharpen an image by simply pushing a button. Grain reduction is not quite as easy, but now it is possible.

In order to help solve the grain problem,

we need to look at the different types of images that may pose a challenge.

The most obvious grain problem resultsfrom using high speed films. In order for the emulsion to capture low light, the silver halide crystals have to be larger, resulting in very large grain. You often get the same grain result when you push a medium speed film to a higher speed.

There are several other cases when you may also get larger appearing grain with normal speed films. If you have an image with blue skies, you may find that the grain structure in the sky looks bigger than in the other colors of the image. This is due to a problem in film design. Landscape photographers prefer very slow ISO, fine grain films, so they can minimize grain in the blue skies.



Nature photographers also have grain problems when they photograph close-up images. The sharp subject hides the grain structure in the subject's fine detail, but the out-of-focus background becomes grain city. Before digital, traditional photographers just lived with grain and made the best of it. Now, with digital photo labs, there are opportunities galore.

The first step in grain reduction is to analyze your image and decide exactly which areas need help. You need to look for out-offocus areas—skies or parts of the photo with no image detail.

For example, the hood of a brightly colored car would have a solid color with no image detail, but plenty of grain. If you were to reduce the grain in the entire photo, you would end up with a soft outof-focus image. Obviously that is not want you want, so let's look for ways to reduce the grain and yet maintain quality.

Once you have decided where you want to reduce the grain, access Picture Publisher, and select these areas with the Select tool.

The fastest selection tool is the Magic Wand. Most first-time editors have trouble with this tool because they don't fully understand how it works. If you use the magic wand on an image with large sky area, and it selects the sky and other parts of the scene, you have the selection settings too wide.

Look at the settings panel and you will see a number between five and 50. This setting tells the magic wand how many different shade pixels it should select from the original selection. A setting of five will select the color you touched and a couple of shades on each side of the selection. A setting of 50 will select a wide variety of shades on each side of the selection.

So, if you select the sky and it selects more than the sky, then reduce the setting until it selects about 50–70 percent of the sky. Using the Add Selection, you can then select a slightly lighter or darker area to add to your selection. Eventually all the sky will be selected.

In some cases there are subjects in the scene that have the same color as the sky. If the magic wand accidentally selects these while it is selecting your sky colors, don't worry because you can easily deselect that portion without starting over. Simply use the manual Irregular Select tool, set it to subtraction, and manually de-select the area that is not sky. If the area to be selected has many tones similar to those areas you don't want, you will have to use the manual select tool for the entire process.

The second step is to "Feather" your selec-

tion away from the area you don't want to apply grain reduction. If you don't use this step, there will be a obvious line between the treated and the non-treated section. The feather tool is usually located in the selection pull-down menu or in the masking section of your software. If you are given the option of feathering inside, center, or outside—select the inside function.

This will feather the selection away from the main subject and protect its sharpness from the effect you will be applying. The width of the feather will depend on the resolution of the scanned image. The higher the resolution, the wider the feather. Generally, we set the feather to 2 for 2k scans and 4 for 4k scans. Everyone has different tastes, so this will take some experimenting.

The third and final step in grain reduction is with the Smoothing or Blur tool. If your smoothing tool has options, preview each to see the effect it will have on the image. The options usually include strength of smooth, and the way it smoothes. The strength is a number, and the more you increase it the more it smoothes. The way that it smooths is called the average/median option. The average allows the smoothing to spill outside the selection, while the median restricts the smoothing effect to the actual selection. If your software does not have a preview window, make sure you have the Undo function turned on so that you can undo and try a different option.

When you first start doing grain reduction, there is a tendency to completely remove the grain from the selected area. It may look really great in the selected area, but the difference between the treated and untreated areas may look too noticeable. It will require some experimenting until you discover the best compromise.

The end result of this grain reduction is not noticeable when performed properly. That's the idea—to do a good job, so most people will not even notice. Then why take all the time and energy? Because photographers will love it! Make samples of images with and without grain reduction and we are sure that the customers will come.

Now that you have your computer version of bottles of grain reducer and jars of image sharpening fluid, put them to use and you'll find you can laugh all the way to the bank.

Jack and Sue Drafahl own and operate a custom lab in Portland, OR. They are also photographers, specializing in underwater photography.