

## COLOR MANAGEMENT AND RENDERING CONCERNS

### Color management selection:

It is important that you only have one master in charge of the color management of the print. When you print, you will have the option to have the software or the printer in charge of the color management. You need to make sure that only one of them is doing the management. If you don't they will attempt to each color manage your print and you will get less than ideal results.

There will be subtle difference and some larger reasons why you might choose one over the other that we won't detail in this overview, but some prints will look better when printed via the printer driver software than Photoshop or Lightroom. In general for this course, we will print out of Lightroom or Photoshop.

When printing, one of the biggest areas of confusion in the print options dialog box surrounds rendering intent. The rendering intent are a process of making decisions on how to deal with colors that are in and out of range of the various devices we use to display images. A bright highly saturated color that appears fine on a computer monitor might not be reproducible by your printer because the color on the screen is outside the physical capabilities of the media used to print it. Rendering intents are basic methods used to decide how to deal with these out of gamut colors.

**Relative:** When looking at the color gamut, relative attempts to move all out of gamut colors to the closest color that is in gamut. The drawback is that you can get banding in gradients for example as colors that are distinct on the screen blend into the same color on the paper resulting in banding. The benefit is that all colors that are in gamut are correctly and accurately produced by the printer. This is best used when you have a small range of color and color accuracy is extremely important. This rendering intent also results in a loss of color as those out of gamut colors are compressed into the single closest color.

**Perceptual:** This rendering intent tries to deal with the issue of banding as a result of out of gamut colors. It compresses and squishes the colors to fit into the output devices range. Because of this, there is a risk of a shift of colors as it moves the out of gamut colors into the printer space. This often times results in a loss of saturation and a loss of vibrancy. When it is a small adjustment, we might not notice but when larger we would detect the shift. This is the most common setting (IMHO) for people printing, because it causes a reduction in banding and the shifts are often times subtle meaning we don't notice the change and the color relationships across the image are preserved.

## PRINTING NOTES

For printing your final prints I would recommend recording the following information:

- Image Name
- Image Filename
- Printer
- Paper Type
- ICC Profile
- Rendering Intent
- Software Used
- Operating System
- Date of Print
- Version Number if applicable
- Color Manager
- Subject
- Misc notes

## PRINTING NOTES

When you are getting started with paper an OEM satin/luster/semi-gloss is a good place to start. You can also work with glossy to get an understanding of the paper. Often times these papers are cheaper than other types as well.

**Thickness** : The thickness of the paper is specified by milli-inches. The bigger the number means the heavier the paper. Some printers can't accommodate thicker papers so make sure that you can print with the paper thickness selected.

**DMax**: A measurement of the darkest/deepest black that a printer/ink/paper combination can produce. The higher the number means the greater the DMax value. Anything that is over a value of 2.0 is considered really high.

**ICC Profile**: Is a set of data that describes and characterizes a color input, output or rendering device. It describes the color attributes of a device and it's mapping based on the profile connection space.

**Signing your prints**: Use a Sakura Pigma Micron Pen I like the #02 and #03 sizes. It is a pigment pen and is archival, but it has trouble with glossy surfaces.