CHAPTER 1

Rendering Intents When Printing
Rendering Intents when printing

The choice of Rendering Intents is one of those areas that very few photographers properly understand so I’m treading carefully here because I don’t want to cause unwanted confusion, however it’s an important aspect of colour management so I shall try to focus on the useful parts and explain them as simply as possible.

When an image is exported to Tiff or Jpeg we choose a colour space such as sRGB. This acts as a container for the colour data and tells the computer how it should look. The problem is that the final outcome is ultimately dependent on what can be physically rendered by each media type, such as your inkjet printer with a specific paper for example.

We make use of Rendering Intents to take the more saturated colours sitting outside the printer’s capabilities and shift them inside the printer’s range using a form of compression. The Rendering Intent simply specifies how the out of gamut colours should be dealt with, so the point worth understanding is why we should be concerned about the choice of Rendering Intent.

The process of gamut compression that takes place when selecting the Rendering Intent shifts the most saturated colours within reach of your printer but also ensures their relative values are correctly retained. Very saturated colours will still appear richer than subtler tones, however the Rendering Intent preserves a more natural balance in the overall image. By soft proofing the image on the display with the selected paper profile we can directly view the effects of Rendering Intents to make an informed decision.

There are actually four different types of Rendering Intent but as photographers you only really need to know about Perceptual and Relative Colorimetric. To avoid confusion Lightroom wisely chooses not to even list Absolute Colorimetric and Saturation.

Chapter Sample - Colour Management Pro © Ashley Karyl 2015
Rendering Intent selection when printing in Photoshop

Chapter Sample - Colour Management Pro © Ashley Karyl 2015
Relative Colorimetric

Relative Colorimetric takes colours that are out of gamut and moves them back into a printable space. Colours within the gamut stay where they are and there is effectively a compression of data.

The advantage of Relative Colorimetric is that no shift in the overall appearance occurs within the image and it’s a good choice when only a small percentage of file colours fall outside the gamut of your output media. The disadvantage is that it can upset the relationship between certain colours, while leading to possible breaks and banding in fine gradations, such as areas of sky.

Perceptual

Perceptual rendering also takes out of gamut colours and moves them back within the printer gamut but does so by moving the other colours to maintain their relative relationship. In other words the perception of differentiation between the tones is maintained, even though there has been an overall shift in their placement.

The advantage of Perceptual is that it produces natural colour renditions and is a good choice when a large percentage of saturated colour is out of gamut for the output device. The disadvantage is that it can cause an overall tonal shift in the image.
For this image I was freely able to choose Relative Colorimetric or Perceptual because the colours remained within gamut.
Which one to choose?

As a rule of thumb I generally send images to photo labs with...

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