



Colour Management – An Overview

Why do you need Colour Management?

Have you ever wondered why your digital camera pictures don't look the same when displayed on your monitor? Or why they look different again when printed out? The answer is that no two devices display colour in the same way. Every device has its own colour range or gamut. Every camera and scanner captures colour differently. Even two monitors of the same model and type will display slightly different results.

To keep your colour consistent from device to device, you need colour management. At the heart of colour management is the process of profiling (also known as ICC profiling). By profiling a device, you can ensure it is displaying colour correctly within its capabilities, based on industry standards. Once the profiles are in place, you can make sure colour is reproduced in the same way by all devices – to put it simply, you can get your printer to create a print that looks as close as possible to the picture on your monitor.

While this may sound complicated, most colour management products are designed to make the process as simple as possible, using automation and easy to use, wizard-based software. In as little as ten minutes, you could profile your entire system.

Monitor profiling

Monitor profiling is in many ways the most important step to successful colour management. While a monitor's colours may 'look' correct, the human eye is subjective; hardware will provide a more accurate reading. Some monitor profiling solutions, such as the PANTONE huey, are entirely automated for ease and speed of use, while the Eye-One Display 2 or Spyder2PRO offer more detailed settings for advanced users. Remember that colour drift can affect monitors, particularly older models; therefore we recommend re-calibrating every 2-4 weeks (2 weeks for CRT monitors, 4 weeks for LCD).

Printer profiling

It is at the print stage where the biggest variations in colour can occur, as every printer and media combination will have different properties. While using your printer manufacturer's ink and paper can usually ensure reliable results, this can be somewhat limiting. If you are using a variety of media and inks, you will need to build a separate profile for each combination to achieve the most accurate results. The main difference between monitor and printer profiling is that while your monitor can only store one profile at a time, you can store several printer profiles and switch between them as appropriate.



Camera profiling

Camera profiling is largely unnecessary for photographers working primarily outdoors, as variable environmental conditions will largely cancel out the effects of the profile. However, camera profiling can be very useful in controlled studio conditions. A solution such as the Eye-One Photo SG is ideal, and accessories such as ColorChecker and Grey Balance charts should also prove useful.

In recent years the cost of colour management solutions has decreased significantly, while conversely the availability and choice has increased. Effective colour management can not only greatly improve the quality of your print, but save you time and money too. ICC-aware software such as the versions supplied with all current colour management devices can recognise the 'gamut' (colour range) of ICC profiled devices, making accurate soft proofing (simulating printer or printing press results on screen) a reality. While colour management cannot replace imaging skill, it can be the key to improving the speed and accuracy of your work, and giving you the results your effort deserves.