

COLOUR PROFILE MANAGEMENT

WHAT ARE COLOUR ICC PROFILES?

ICC stands for the International Color Consortium which was established in 1993 by eight industry vendors for the purpose of “creating, promoting and encouraging the standardization and evolution of an open color management system architecture and components”. They created and developed the ICC profile specification. www.color.org

Simply put, colour profiles are like languages; primarily they allow for the colours of a digital image to be ‘understood’ and correctly created & displayed on different things like cameras, computer screens, iPads, inkjet prints, newspapers and advertising posters. Secondly, to overcome the problem that all these different devices and media have different levels of quality in reproducing colour (whether in light or ink), we use some more general use common colour profiles or languages to describe the colours of the original image. By doing so it will look similar on all of the different devices and media (it’s worth pointing out though that these devices need to be properly working in the first place so that their displays aren’t inherently distorted).

However, using a very general colour profile that devices and media can understand, does mean that images can end up being communicated in the most basic language: so although this might look acceptable on something with a limited range of colours or ‘vocabulary’ (like a website or newspaper) it’d be a disappointment when made into a fine art print; the different colours would be flattened together and missing much in the reproduction of the original image. It’s a bit like if Einstein’s ideas had always being communicated through a mobile phone text message rather than through an academic thesis; granted a text message would be succinct, abbreviated and to the point, but it wouldn’t fully communicate the original idea with all its subtle intricacies which go to make it up. So we end up using a few specific common colour profiles depending on the image usage, so that the original image can not only be understood and displayed correctly, but also displayed to the highest possible quality that a particular media is able to reproduce the original image.

WHY CHOOSE THESE SPECIFIC COLOUR PROFILES?

For most users of our images we suggest that the medium and small formatted images intended for office use and web publishing use the **sRGB.icc** profile, whereas the largest formatted version intended for printing and publishing use the **eciRGBv2.icc** profile.

sRGB

sRGB is one of the most commonly used colour profiles in many digital cameras, and computer screens, and is similar to the colour language of the web (built with viewing by screen in mind). Most standard inkjet printers can easily reproduce its range of colours.

Eci RGBv2

eciRGBv2 is recommended by the European Colour Initiative (ECI) for use as an RGB working colour space and colour data exchange format for ad agencies, publishers, reproduction and printing houses. It has a 'larger vocabulary' than sRGB which as a colour space has some weaknesses: - there are a lot of colours today's printing presses and other output devices like photo printers, large format printers and many inkjets (not to speak of up to date monitors or digital cameras) can produce but cannot be stored in sRGB. For quality reproduction and basic archiving, eciRGBv2 is definitely the preferred option to sRGB.

(<http://www.eci.org/en/colourstandards/workingcolorspaces>)

ADOBE RGB 1998

AdobeRGB1998 has been and is still a very common colour profile used in photographic images, it also has a 'larger vocabulary' than sRGB and is similar to eciRGBv2. Many people use it because they use Adobe's Photoshop for processing their images. However it has some weaknesses in colours that are not included in its vocabulary (it was original based on TV screens), some of these quite commonly found in artworks (especially yellows). It has another weakness when translating the image's colours for high quality printing – a completely different language (like Mandarin is to Latin) - a lot of the colours get misrepresented. For quality reproduction and basic archiving, eciRGBv2 is definitely the preferred option to AdobeRGB1998.

ARCHIVE IMAGES

These are the master images that although often similar in size to the Large formatted images they use a much larger colour profile to describe them. They don't have any applied use in themselves and are never used other than to make formatted versions from for specialised applied purposes. We maintain ownership of these files and they are termed as 'AM' (Archive Master). We keep them for two years in case there is a specialist use for the images which require a particular colour conversion to be tailor-made. After this time we may decide to delete them; if you specifically require us to keep them for a longer period then please let us know and we can agree their storage and purchase.

CMYK PROFILES

The colours that make up an image can either be in light – (computer monitors, projectors, etc) or pigment (that colourises paints, inks, dyes, etc). The primary basic colours of light are Red, Green and Blue; and with pigments; Cyan, Magenta, Yellow and Black. These two different worlds of colour are identified and abbreviated as RGB colour space for light and CMYK colour space for pigments and inks. There exist colour profiles or languages for both of these spaces and it is possible to translate images made with light colour (photographs) into images made of pigment colours (prints).

The translation or conversion of an image from RGB colour to CMYK colour is very reductive because the latter has a much smaller vocabulary or colour palette. It isn't possible to reproduce every colour made in light into pigment and the conversion process means that certain colours get left out. Just as an artist has to do: converting the colours is a very selective process. Even with the largest palette it would not be possible to reproduce all the colours that they see. They have to be specific about which they choose to show and which to leave – this is very much the case when converting RGB colour space images to CMYK. The different CMYK colour devices which have to produce the image have to do so with a much reduced colour palette that often uses quite sensitive materials that are subject to change. Hence it is not uncommon for images not to be reproduced on a CMYK device as accurately as on an RGB counterpart if a common standard CMYK colour profile is used. Custom made specific CMYK profiles are always preferred when trying to achieve the highest quality of reproduction. Fortunately by having the original RGB image use the correct colour profile or language in the first place makes it much easier to get more successful results from the CMYK converted printed image.

It is agreed though that every time one wants to make a CMYK colour image for a specific use (such as a newspaper or poster), one should always make a new version converted from the original RGB colour image, rather than convert it from a CMYK colour version of the image that is using a different profile.

The large version image files that we provide are optimised not just for reproducing on high quality screens and Hi Fi inkjet printers but are also profiled to ensure the best possible colour reproduction after they are converted to the required CMYK colour profile of the specified output printing device.

HOW TO INSTALL COLOUR PROFILES

Most devices already have the **sRGB** colour profile pre-installed and can understand it (however it is available to download at: <http://www.color.org/srgbprofiles.xalter> (select v2 not v4)).

EciRGBv2 isn't installed as standard yet because of being for the more specialised application of understanding print quality images. Before you properly view the large images you'll need to download it from the European Color Initiative's website: <http://www.eci.org> Downloads > RGB Working Space Profiles > EciRGBv2.zip (4KB)
(http://www.eci.org/_media/downloads/icc_profiles_from_eci/ecirgbv20.zip?id=en%3Adownloads&cache=cache).

N.B. In the case of not having access to these websites, the profiles have also been included in the 'Colour Management' folder of the project folder/ image disc.

Installation instructions;

MAC OS X

Copy the ICC profile files to the **\Users\Library\ColorSync\Profiles** folder. Profiles installed in this location will be available only to the user who installed the profiles.

or

Copy the ICC profile files to the **\Library\ColorSync\Profiles** folder. Installing in this location requires the user to be an administrator of the system. Profiles installed in this location will be available to all users.

WINDOWS

Select the profile, click and hold the right mouse button and choose the **'Install Profile'** menu item.

Please remember when distributing the large version image files to either include the relevant ICC profile file or direct the recipient to the relevant website.