



When working with a computer graphics system, the colour on the screen or from a computer colour printer is very rarely how the colour will appear when it is finally printed.

Objects appear to be certain colours because of their ability to absorb, reflect, or transmit light, which we perceive as colour. Our eyes are sensitive enough to perceive thousands of different colours in the spectrum of visible light - including many colours that cannot be displayed on screen or printed on a commercial printing press.

Different media manipulates light in different ways. Video technology for example, a computer monitor, scanner or television screen uses the additive RGB (Red, Green, Blue) model; it transmits light, which we perceive as different colours. In commercial printing, however, translucent Cyan, Magenta and Yellow inks are printed on a page. Printing uses a fourth ink, Black, to deepen shadows and to print true black type and lines. These inks absorb and reflect light; we perceive the reflected light as different colours.

The visible spectrum contains millions of colours; each device used in commercial printing can reproduce a unique subset of this range known as its colour gamut. While the colour gamuts for different devices overlap they don't match exactly, so colours available on screen may not be printable on a press.

"When it comes to colour, what you see is not always what you get." February 5, 2003. Herald Sun Melbourne. Greg Thom

People think what they see on their computer monitor is what they are going to get on their printer. One of the key things people should remember when it comes to accurate colour reproduction is that no two devices are the same, be they digital cameras, computer monitors, scanners or inkjet printers.

A program like Photoshop, a printer and scanner, all see colour in different ways. They are all speaking different languages. Colour management profiling is like an interpreter. It helps level the playing field. Each device such as a computer monitor comes with a factory-set default profile. Building a custom profile can reduce the margin for error. A monitor can display about 16.7 million colours. You are lucky if 60,000 of them are going to print.

"We are talking about light in nature. No human device can perfectly reproduce that."

No matter how skilled the practitioner, perfect colour reproduction is not achievable.