

The Vision

- To create and store just one top quality "master" image or document in a content database.

The Vision

- To repurpose that "master" image or document accurately to any current and future electronic or print technology. Technically this is defined as a device-independent workflow.

The Vision

- To accurately soft-proof that "master" image or document on screen for any output option.

The Vision

- To output that "master" image or document in an automated workflow with no user intervention being required to deliver a colour-accurate product.

Why do current colour strategies fail ?

- Current colour strategies fail because publishing workflows were designed for "closed-loop" CMYK environments. This is called device-dependant workflow.

Closed-loop strategies fail in an open publishing environment.

Why do current colour strategies fail ?

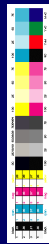
- Current colour strategies fail because even identical equipment from the same production run is slightly different. Manufacturing tolerances are just not tight enough !

Why do current colour strategies fail ?

- Current colour strategies fail because some technologies are very "drifty".
Example 1 : Monitors drift as they age.
Example 2 : Toner-based printers are sensitive to paper condition, temperature and humidity.

Why do current colour strategies fail ?

- Previous colour strategies fail because the controls are densitometric. Densitometric controls can prevent process drift, but provide no mechanism to map the colour differences and spaces of various device types in today's publishing workflow.

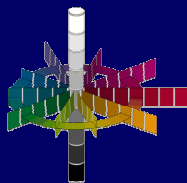


International Color Consortium

- ICC = International Color Consortium
Founding Members: Adobe, Agfa, Apple, Kodak, FOGRA, Microsoft, Silicon Graphics, Sun Microsystems.
- Current membership exceeds 100 leading companies in the area of digital publishing.

How does modern colour management work ?

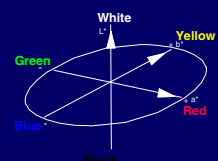
- The colour management strategies envisioned by the ICC work by manipulating colour in 3-dimensional space.



How does modern colour management work ?

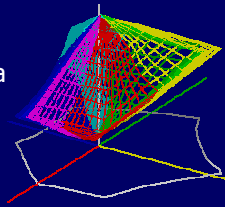
- That 3-D space is often the colour space CIE Lab.

L: Brightness
a: Green - Red - Axis
b: Yellow - Blue- Axis

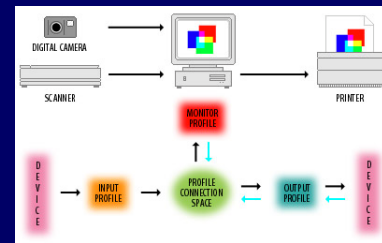


How does modern colour management work ?

- Different devices like scanners, monitors and printers each fill a part of the CIE Lab colour space. This is known as the gamut of a device.

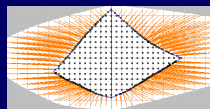


How does modern colour management work ?



How does modern colour management work ?

- ICC profiles modify digital information to suit the intended device. This often requires gamut compression.



How to Interpret Color Differences

- Differences in colour are indicated as Delta E (ΔE^*)
- | | | |
|--------------|------------|-------------|
| ΔE^* | 0.0 to 0.2 | not visible |
| ΔE^* | 0.2 to 1.0 | very small |
| ΔE^* | 1.0 to 3.0 | small |
| ΔE^* | 3.0 to 6.0 | medium |
| ΔE^* | 6.0 and + | large |

How does modern colour management work ?

- **REMEMBER**
 - Colour management is not a magic bullet !
 - It will not substitute poor work practices !
 - A level of knowledge and discipline is a prerequisite.

Presented by

Multimatch Australia Pty. Ltd.

www.multimatch.com.au

Nadish Naoroji

nadish@multimatch.com.au