

## Implementation Hesitation

### Questions...and *Answers*

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Now is the time for action! Everything you've learned thus far in this series comes together in this article to give you a glimpse of how to implement color management, specifically ICC-based color management.

How do you implement a Color Management System? Should you start working on a budget to buy all sorts of expensive stuff? Not really. The most important thing about a well-implemented CMS (Color Management System) is workflow.

What is a workflow? My definition is "how you do things." This may sound simplistic, but basically workflow is how you receive and send out images and services. When X happens, you do Y. If Z happens you run. Just kidding.

If you have read all of the articles in this series, you have come a long way to understanding color management. You understand why there are color matching problems between devices. You understand the relevance of device-independent color spaces such as CIE L\*a\*b\*. You understand that a ColorSync/ICC profile describes the color space, the color capability of a device such as a scanner, digital camera, monitor, printer or printing press. You and your workflow are better prepared to tackle the color matching problem, and fix it, just by having this knowledge and understanding.

Believe it! Now when you see color not match from one device to another, you will know the reason is that the data being sent to the output device is not customized for that specific device. It's not the device's fault! It's just the way it is. The way to fix the problem is to define that printer's color capability. Its color space. Its gamut.

ICC based color management is very scalable. You can implement in stages without having to take steps backward when you decide to expand the current system. This method of implementation will allow you to

become familiar with color management in stages, building on experience to determine the right path for your specific situation. This is also how to refine your workflow to include color management.

What's the best first step? The best first step is to make your monitor predictable. I prefer Adobe Gamma (comes with Photoshop 5) because it will make a semi-custom ICC profile for the monitor upon completing all of the steps. The resulting profile is then selected in the ColorSync Control Panel as the System Profile. Photoshop 5 will automatically use this. Other applications will likely need the monitor profile set manually in a color settings type dialog box.

On a real basic level, this is it. Seriously! You now have a more accurate preview of RGB and CMYK images. There is a potential caveat where CMYK images are concerned. An application's CMYK color must be configured correctly. This means specifying an appropriate color space for intended output.

How this is done depends on the application. So you will need to become familiar with your application's documentation on using ICC profiles. In the case of Photoshop 5, most people use the Built-In settings. You can actually save these settings as ICC profiles, place them in your ColorSync Profiles folder, and use them in other applications such as QuarkXPress, Adobe Illustrator, and Corel Draw.

What's the next level? Buy a monitor calibration/profiling package. Two examples would be the X-Rite Monitor Optimizer, and the Color Partnership Optical/Optimate. These are emissive colorimeters that use a suction cup to attach to your monitor. Instructions are provided on screen, and will provide a custom calibration and profile for your monitor.

Having a consistent and characterized monitor is the lynchpin of a majority of color managed workflows. It's

important to seriously consider starting with monitor calibration and profiling in order to begin implementation.

Throughout your progression of implementing color management, involved everyone. This is what workflow is about. How you do things. This means involving the sales staff, and including your color management capability in promotional material. Workflow training means giving the appropriate information to the appropriate people in your organization.

Next? You will want a profile for your inkjet or color laser printer. This will allow you to produce in-house proofs simulating your commonly used output devices. Actually you will be able to simulate any device for which you have an ICC profile. Imagine accurate and fast in-house proofs. Are they dead-on perfect? Probably not. But they can be an excellent representation of your contract proof, eliminating multiple iterations with expensive proofs.

What's optional but helpful? There are really too many to go into fully here, but some samples include batch processing with AppleScripts. If you have a number of images that need to be converted from CMYK on Coated paper to newsprint every week, an AppleScript can do this for you without Photoshop or any other application being involved. You can actually drag and drop a folder containing hundreds of images and have them repurposed for web, newsprint, or for generating proofs! Major time savings here.

Another tantalizing example of where you can save time are custom palettes for all of your applications. Imagine having a palette, common to all applications, that contains only Pantone or Focaltone colors that can be reproduced on a specific press. If the Pantone™ color isn't in the palette, this is telling you it can't be effectively reproduced with process inks. It means you must use spot color. Instead of guessing, you can have this capability in the initial design process.

Finally, the ultimate workflow. How would you like to work strictly in easy to use RGB, and not even deal with CMYK images? Those expensive high quality scans inherently contain less color in CMYK. Why not have them scanned as RGB and repurpose them with ICC profiles? When it's time to go to press, give your service bureau RGB images. Let them use their own ICC profiles and experience with CMYK provide you with better separations in far less time. You're the customer, ask for this capability!

Wrapping up this series, hopefully you have learned the reason why color does match from device to device, how you can define the unique color space of each device in relation to a device independent color space by using an ICC profile in a well implemented Color Management System to save you time and money. Whew!

Conventional workflows work, but can they be aided by technology in order to make it faster, easier, and more predictable? There are over one million people using ColorSync/ICC based workflows today. And the reason you don't hear about it is because it works very well, and it's a competitive advantage. You decide.

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