

# ImageXpress UnTechnical Bulletin

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## COLOR MANAGEMENT ICC Profiles



Keeping it simple . . . color management means making a picture LOOK the same every time it is seen . . . on computer monitors, over the internet, or on paper. Color management issues can be confusing, and quite difficult to understand.

Before the advent of desktop publishing, the topic of color management was reserved for a small group of highly-educated color scientists and very experienced color separators. Now anyone producing color files must have a basic understanding of the topic. It is the purpose of this series to shed accurate, non-technical light on basic color management issues.

### Profiles

A profile is simply an evaluation report. There are several kinds of profiles: input, monitor, and output. Each is a color performance evaluation of a unique device. Profiling assesses the capabilities of a single device so that color pictures captured by (or sent to) that device will address those capabilities, compensate for its inaccuracies, and portray color images as accurately as possible.

### The Case For Profiles

Clearly, there is a need for a method of insuring that a single image file can be portrayed on a number of different devices, with reasonable similarity. There are literally hundreds of varieties of devices that possess very significant display differences. Users need (and deserve) the assurance that files will retain their essential integrity when sent to another location.

There is nothing scarier than releasing a file to another user, service bureau, printer, or whoever . . . wondering if the file's visual integrity will be compromised. The ultimate hope is that "what I see is what you'll see" (WYSIWIS?).

ICC Profiles offer this and more. \*\*When all parties play by the same (ICC) rules, any file produced on my computer will look very similar (absolute perfect matching is never going to be possible) on your monitor. Further, if what I produce on my computer is going to be printed on *your printer* (or proofer), I can see in advance what the printed piece will look like by viewing the file on my monitor, "filtered through" the profile for *your printer*.

If all this sounds a bit confusing . . . that's because it is! Nobody thinks the process is simple. But \*\*\*when it is carefully orchestrated and accurately maintained, it really works.

### The Case Against Profiles

If you have ever gone to a tailor, or seamstress, to have a garment fitted to your measurements, then you know how good custom-fitted clothes can look. By the same token, you also know how bad that garment looks when you have gained or lost a couple of pounds.

Precision profiles only work with precision when none of the characteristics of the profiled device change. Any variations from the conditions existing when the profile was generated (ink formulations, paper types, lamp age, etc.) will produce varied results.

\*this word is used to represent the various ways devices express image data. Scanners "see" and capture image data, monitors display image data, and printers print image data. For the sake of this paper, all "portray" image data. \*\*The fly in the ointment. \*\*\*Yet another, somewhat larger, fly in the ointment.

It's easy to hit a stationary target, but difficult to hit a moving one. In one sense, a profile is like a passport photo. It is only accurate if taken recently.

Generic profiles, are no more useful than the height/weight charts in a Doctor's office. Keep in mind that the "average man" doesn't really exist, and an average profile will not address the particular behavior of you specific device. Close only counts in horseshoes. Color reproduction ain't horseshoes.

### The Bottom Line on Profiles

If you're going to join the ICC Profile ranks, be prepared to to it right. Do your homework (read and search the Internet). Start by counting the cost (time, energy, software, hardware, testing, hair), putting a definitive limit on how much of which you are willing to invest, and what that investment will buy you.

The ICC profiling system is a work in progress. There are no quick answers. Certainly no easy ones. All acclaimed panaceas, in this case, are more likely to be placebos. While there is no argument about the need for a system (and this is the best one yet) the current implementation still has a long way to go to meet everyone's needs.

The current estimate is that only a small percentage of Photoshop users can even appreciate, let alone understand and afford, the full gamut (pun intended) of ICC profiling tools and methodologies available.

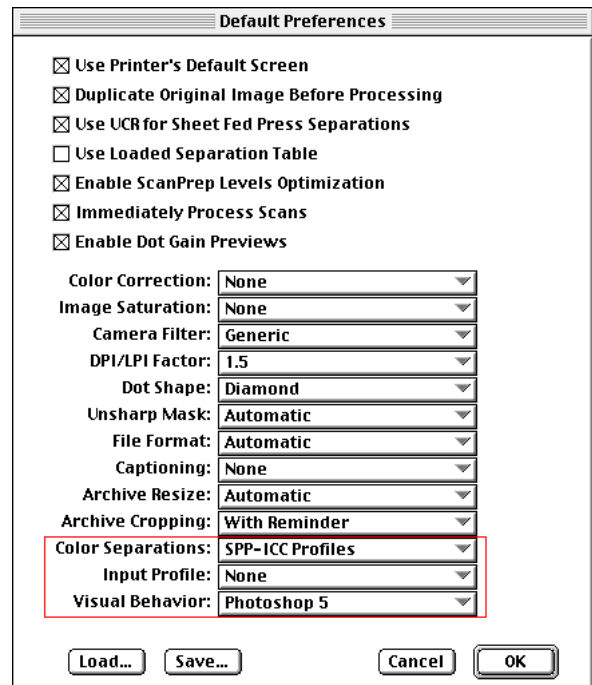
Much simpler tools and much cheaper measuring devices must appear before the system becomes a staple in the (mere-mortal end of the) publishing community.

The current recommendation is that more than 900 color patches (as in the industry standard IT8.7/3) must be output (and accurately measured) from a device before an accurate profile can be generated. It has been argued that this amount of patches is a quite excessive test for the majority of desktop printers.

Time, and public acceptance, will tell.

### Using ICC Profiles with ScanPrepPro

ScanPrepPro provides easy way to incorporate input and output profiles into the production workflow. Within ScanPrepPro's Preferences dialog, choose your scanner profile from the "Input Profile:" menu, and your desired output profile from the "Color Separations:" menus. These menus will list all profiles available from the ColorSync folder (Input Profiles only access RGB input



device profiles, and Color separations only accesses CMYK profiles).

Simply select the profiles of choice. When scanning from within ScanPrepPro, ScanPrepPro will then automatically load the designated profile before opening the scanner driver. When separating the image, ScanPrepPro will use the designated profile to perform the conversion.

In the case of scanner profiles, if the user either doesn't have a profile, or doesn't prefer to use a profile, he can simply choose "None" from the menu.

ScanPrepPro's highly respected color separation tables have been carefully transposed into ICC profiles. For those desiring to use ICC profiles, but also desiring to continue using ScanPrepPro's separation process, this option is a very valid choice.

When a specific paper and press combination are selected from the main dialog, and color separation is chosen from the Desired Result menu, ScanPrepPro will automatically load the proper SPP ICC profile.

When Current Image processing is selected from the Source menu, ScanPrepPro will automatically choose the "None" selection. The next time a scanning scenario is required, ScanPrepPro will again automatically load the profile selection from the Preferences dialog. The default setting for the Input Profiles is "None."