

# Geek Alert!

## Eddie Tapp and I Discuss in Camera Color Space

On Apr 7, 2009, at 1:54 PM, sjh wrote:

Eddie,

We've met through Jim, before.

He suggested I run the following before you:

I was in a class, this weekend, where the instructor said that the color space assigned in the camera travels with a RAW file into the post production processor.

Both Jim and I think that is wrong.

We believe that a RAW image is totally unaffected by the color space choice in the camera and is not affected by a color space choice until it is process and converted to another format.

Said another way, Jim and I believe that whether a camera is set to sRGB, Adobe RGB, or any other space does not change a RAW capture.

Are we correct?

We are asking you because Jim says you are the true expert on this. The teacher who said it in class is very tech savvy, but I think he's wrong on this one thing.

Thanks.

On April 7, 2009, Eddie Tapp wrote:

Hello Steve... Two answers here..

1st, you are quite correct about the color space... a color space is not embedded into the file until it goes thru a process in any software... ACR, Aperture, C1 and even Lightroom, however Lightroom's default color space is ProPhotoRGB (thank goodness) unless you change it. Only when you shoot JPEG in the camera is a color space embedded in the camera. Viewing the full spectral of a RAW file's color space capabilities are somewhat impossible unless you have an enormous color space on

your monitor... On the other hand... IF you embed sRGB, it's much easier to see the full spectral of the files colors... (thought I'd throw in a little extra ;)

2nd, for the moment, think of a color space as white balancing... once you white balance the light... when you process the RAW file you can move a slider to change the (color) white balancing, and if you did, this is what I call "re-centering" the color... Look at a camera Matrix settings... contrast, color space, sharpness, look (i.e. portrait, product, landscape etc.) along with setting a custom or preset WB and create a good exposure... and even thou your shooting RAW, these elements have been "centered" for you to start processing work with. This must somehow be what and who ever mentioned about the color space traveling with RAW files... Now, while I'm thinking of it, stop thinking of a color space as white balancing... =o)

thank you, Eddie

On Apr 8, 2009, at 9:47 AM, sjh wrote:

Eddie,

I was thinking about your response, yesterday, and want to follow up.

A RAW is a RAW, until it is converted to another format.

Until that time, any processing of the RAW image is done with instruction sets and no pixels are modified or altered.

In the camera, color space, and other modifications do not, in fact, alter the RAW image. However, they will have an impact on the .jpeg the camera produces for use on the LCD and to create the histogram.

However, there are RAW processors, that recognize some of the camera set modifications and -- when you open the image -- apply them, as starting points; they are part of the RAW image instruction set and not one pixel has been modified.

For example, Nikon allows me to pick a color space, sharpen, add D lighting, etc -- when I am shooting RAW.

I will see those alterations on the .jpeg on the LCD.

(And, if I shot a .jpeg, the image would be modified to fit those settings.)

AM I RIGHT ABOUT THIS?

Depending on the RAW processor one uses, when importing a RAW image, the processor may recognize those "in camera choices" so that they are the "starting points" in the RAW process.

I say depending on the RAW processor because NX2 will use those as starting points but CS4 and LR2 will not; that is why Adobe created "camera profiles" for LR2 and CS4 -- to get closer starting points.

I think that is the gist of what you said, yesterday, using your "white balance" example.

If I am correct about this, Jim and I are right that the color space selection made in a camera does not have an impact on a RAW image -- because no interpolation is being done by the camera (as it is on a .jpeg) and the choice of color space has no impact until the image is converted from the RAW to another format. At the most, the "color space choice" travels with a RAW as a starting point which can be easily changed at the time of conversion.

I know this is a bit geeky, but that's who I am. I really like to understand this stuff.

Once more, thank you for taking the time to put me (keep me) on the right path.

Steve

On Apr 8, 2009 Eddie Tapp wrote:

Steve... I'm pleased to inform you that you have earned an A+... yes, you have nailed down the anomalies surrounding the RAW file workflow... thank you, Eddie