

Real color photography

Brad Malcolm of Athentech Technologies Inc.
discusses how what we see isn't always what we get

Have you ever read a book and then gone to the movie ... only to be disappointed? Remember the last time you read a great book and envisioned the characters in your mind's eye? You then went to see the movie based on the book. But the two didn't match and you were let down! We've all had this experience, because the images in our mind's eye have been substituted with someone else's representation.

This exact same thing happens all the time in our photography industry. You're walking in a beautiful park on a brilliant, sunny day with your fiancée. You look at her face in the shade of a tree with a backdrop of vibrant green leaves and spring grass. You decide to capture the moment; but when you get the picture back, the grass isn't green – it's black! And none of the details on your fiancée's face are visible! This dark photo is unlike what you saw with your eyes. And we don't get a second chance to take that shot.

The experience versus the camera ...

... and why the two should match.

When you view an event, your brain records a picture in your mind's eye. Your brain's picture is encoded with all the

information your senses gather from the experience – sights, sounds, smells, tastes, and feelings. All these sensory details translate to a powerful and essential emotional connection to that memory.

Unfortunately, the camera doesn't achieve this. Why?

Digital cameras are incapable of capturing the actual colors of an event because the definition of RGB restricts the color spectrum of the camera. (Try capturing a purple FedEx box. Its famous trademark color will be captured as blue!)

Furthermore, the single aperture of a camera is incapable of replicating the light gathering abilities of the iris of the human eye; therefore, some portion of every photo is improperly exposed.

Last, the digital signal processors (DSPs) inside the camera include processes that arbitrarily change the colors in the photo, further distorting your precious memories.

Maintaining memories

Who has the right to steal the customer's digital advantage and change memories?

To reconstitute exactly what you saw during the original event so your subconscious will reactivate and represent to you the sensory information (emotions) of

your original experience, it is necessary to use a digital correction to:

1. Reintroduce the full spectrum of colors seen with the human eye.
2. Treat each and every pixel as if it were a lens aperture and, like the human eye, perfectly optimize the light in every pixel of the photograph.
3. Correct clarity, depth, vibrancy, noise, abnormal tints, and red eye, while rigorously maintaining the real color and optimal lighting without introducing clipping or artifacts.

The photography industry has evolved to digital. Most enhancement "solutions," however, are still analog based – shoe-horned into the digital world, producing compromised results and damaging your customers' memories. Approaches such as memory colors, histogram equalization, brightness, and hue controls all change the colors, introduce artifacts, and cause a loss in color vibrancy.

On the other hand, a proper digital correction results in an accurate and beautiful photograph that triggers the original emotions of your customer as they relive the memory. Users of such corrections save, print, and share more photos.

Let's make watching the movie as good as reading the book! ■

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