Subject: Re: images taken in different daylight all conatining a color reference
Posted by Jeremy Bailin on Tue, 01 Sep 2009 12:18:29 GMT
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On Aug 31, 3:12 pm, Thomas Nehls <thomas.ne...@googlemail.com> wrote:
> I have a not so much IDL problem:
> I have taken some pictures, some in the morning, some in evening, some
> in the sun, some in the shade.
> They all contain acolor reference.
> Given that all individual images are homogeneous in light (no dark
> regions, no lighter regions) there must be a possibility to process
> the images in a way, that they all show the same (or nearly the same)
> R,G, and B values for the colors on the color reference, right?
> Can I find models how to treat the colors of the whole image just by
> using the color references?
>
> Thanks for any hint how to start with that problem, I dont find the
> entrance to it... :-(
>
> Tom

You might want to take a look at David's histogram matching discussion
to get some ideas...
http://www.dfanning.com/ip_tips/histomatch.html

-Jeremy.

Subject: Re: images taken in different daylight all conatining a color reference
Posted by Thomas Nehls on Tue, 01 Sep 2009 19:24:26 GMT
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thanks for the hint, I checked it. Now I am in the topic.

I found somebody who gives the sRGB values of the colors on the color control patches I photographed, that means I can calibrate the photographed color control patch colors all together to the "one" the "right" sRGB combinations, right? meaning all the color control ptches in all my pictures will show exactly the same colors?

I found some approaches of histogram warping. I would try the following: cutting the photographed color control poatches, size them equally, then I would calculate the transformation, it would be different for each image.

I found some papers from the mid 90ies to early 2000s discussing the best way to warp images, linear vs non-linear models. May be this is already integrated in a IDL procedure or function?

then: can I apply the transformations calculated for the color control
patches to the rest of the images? (I would have to, right?)

Thanks in advance (from the non image processor and non programmer)
Tom

Subject: Re: images taken in different daylight all conatining a color reference
Posted by Jeremy Bailin on Wed, 02 Sep 2009 14:18:08 GMT
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On Sep 1, 3:24 pm, Thomas Nehls <thomas.ne...@googlemail.com> wrote:
> thanks for the hint, I checked it. Now I am in the topic.
>
> I found somebody who gives the sRGB values of the colors on the color
> control patches I photographed, that means I can calibrate the
> photographed color control patch colors all together to the "one" the
> "right" sRGB combinations, right? meaning all the color control ptches
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> I found some papers from the mid 90ies to early 2000s discussing the
> best way to warp images, linear vs non-linear models. May be this is
> already integrated in a IDL procedure or function?
>
> then: can I apply the transformations calculated for the color control
> patches to the rest of the images? (I would have to, right?)
>
> Thanks in advance (from the non image processor and non programmer)
> Tom

Yup, that all sounds reasonable to me... I guess the key bit that's
still unspecified is how you calculate the transformation from the
patches. I don't know of any pre-existing routines for this, but it
wouldn't surprise me if they existed. We actually had a discussion
related to this back here:

http://groups.google.com/group/comp.lang.idl-pvwave/browse_t hread/thread/2118f477823ce219

...but it sounds like you're already far enough into the literature
that you know more about this than we do. ;-)

-Jeremy.
