
Subject: Producing potable color images from IDL?
Posted by [Chris Mulliss](#) on Sun, 24 Nov 2002 15:04:53 GMT
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Hello,

This is not strictly an IDL question, but here goes...

When I produce 24-bit color images in IDL (running on a SUN) and try to display them on an SGI or Windows box, they tend to come out looking very dark.

I have been told that it is probably a hardware-dependent gamma correction problem. I have been told also that the PNG image format has the ability to store the gamma value of the machine that the image was created so that the image can be "gamma corrected" on other platforms. IDL's help on PNG does not mention this feature and I have this problem with all file formats that I have tried including PNG.

So, does anybody know what is going on? Has anyone found a way to make images in IDL that don't look dark on other platforms? Does anyone have a reference to the mathematical nature of this "gamma correction" so that I look into accounting for it in code.

Thanks,
Chris

Subject: Re: Producing potable color images from IDL?
Posted by [Rick Towler](#) on Mon, 25 Nov 2002 18:00:00 GMT
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"Chris Mulliss" <cmulliss@columbus.rr.com> wrote

> I have been told that it is probably a hardware-dependent gamma correction
> problem. I have been told also that the PNG image format has the ability
> to
> store the gamma value of the machine that the image was created so that
> the
> image can be "gamma corrected" on other platforms.

This is true:

<http://www.libpng.org/pub/png/spec/PNG-DataRep.html#DR.Gamma-correction>

This might help too:

<http://www.libpng.org/pub/png/spec/PNG-GammaAppendix.html>

> IDL's help on PNG does not mention this feature and I have
> this problem with all file formats that I have tried including PNG.

As David mentioned, IDL doesn't support this feature. libPNG does support this feature (I think) so you could write your own png import/export routines that incorporate gamma correction into the image. The only problem would be getting a "system" gamma from the machine when you create the image.

Your best bet is to calibrate the systems that you will be viewing your images on. Most better monitors in the PC and Mac realm come with color correction utilities. It might be more difficult to find such software on the Sun/SGI side. Alternatively you could come up with your own calibration system and use a viewer you write in IDL to apply corrections on each machine. Or, just turn the brightness down on your Sun monitor :)

-Rick
