
Subject: Re: Working with color, cursor, and png to extract information

Posted by [Brian Larsen](#) on Mon, 04 Feb 2008 21:43:54 GMT

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> The problem is that this image is not a reflection of "values",
> it is a reflection of colors used to represent those values.
> And those colors are not built into the palette, which as you
> see is just strictly gray scale, but into the fabric of the
> image itself. This is not the kind of image you can do science
> with, I guess is what I am saying.
>
> An image is encoded with a scheme that can represent 16.7 million
> colors. A color table typically contains 256 colors. But, *which*
> 256!? Obviously, there is no one-to-one relationship.
>
> Suppose you do a statistical analysis and find that out of
> the 16.7 million possible triples, you only have 16 in your
> image, representing 16 colors. You still don't know the foggiest
> thing about the *values* those colors represent, unless you
> have information you are not sharing with us. That is to say,
> the "meaning" of those color triples is not encoded in the image
> in any way. Presumably when you look for a "value", you are looking
> for a physically meaningful number. There are no such numbers in
> a 24-bit image.

David,

I am not sure I agree with you entirely on this, if it were as
hopeless as you say then why do we make those plots, our eyes can
obviously decode the "meaning" in the color. Since you have the
colorbar, it seems that gives a one-to-one mapping of colors to data
value. At the worst case maybe just at the points in the colorbar
where you have the value.

If I ask the question another way does it make more sense? How can
one choose out of an image a particular color and then display that?
For example in that aerosol image of yours say I wanted to know where
the data was between 3 and 3.5 (red), I can presumably "select" red
and then pull out the red pixels from the image? No? Is this as easy
as the 3 elements in `image[:,0, 0]` and a `where` statement? I am not
too clear on exactly how the colors are built.

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics
