Subject: Re: Color table questions
Posted by Haje Korth on Fri, 20 Feb 2004 20:28:51 GMT
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Mike,
I see you are up to speed. Thanks for the web page info. That will be a good link also for lazy people trying to avoid a trip to the library. It can't get easier than having it served on a silver plate. :-) What I have done in the past is try to stick to one or two colors. One color can of course be just grey shading. I use two colors for bimodal data sets using white the transition color (zero). Also I make use of step functions rather than smooth gradients. Once it comes of the printers, I can never distinguish 256 shades anyway.

Greetings,
Haje

--

"Michael Wallace" <mwallace.removethismunge@swri.edu.invalid> wrote in message news:103cnnc4ku4pg20@corp.supernews.com...
> Haje Korth wrote:
>> Mike,
>> You should toss that rainbow colorbar if you do science. This color bar is
>> highly non-linear to the human eye and you tend to emphasize features that a
>> completely non-physical, but rather due to changes in the gradient of the
>> color bar it self. I did actually some research on that a while ago. I found
>> one article that illustrates the topic well:
>>
>> B. E. Rogowitz and L. A. Treinish, How to NOT lie with visualisation,
>> Computers in Physics, vol10, no 3, 1996. (Make sure you get a color copy,
>> otherwise you will not be able to verify what the authors are talking
>> about.)
>>
>> The topic says it all: Pretty pictures alone do not guarantee good science!
>> I am not trying to be arogant (not my nature), this is just a simple
>> statement that I had to find out the hard way myself.
>
> Yes! That's exactly why I want to toss out the rainbow color bar --
> because it is very non-linear to the human eye. So, simply put, I'd
> like a colorbar that is linear (or as close as reasonable) to the human

> eye but still includes several distinct colors. I only mentioned the
> rainbow color bar because it includes several colors which flow together
> nicely. What it doesn't have is linear spacing between colors.
>
> I'm asking the question because, other than simple gradients, I haven't
> completely figured out how to make not only a good looking colorbar, but
> one that's also linear. I would have thought that someone else out
> there might also want to do this...
>
> As for the article you mention, that should be on the reading list of
> anyone who does science data analysis with colors. Here's an on-line
> version:
> http://www.research.ibm.com/dx/proceedings/pravda/truevis.ht m
>
> Mike
