Subject: Re: transparent colours for filling contours?
Posted by david[2] on Tue, 14 Aug 2001 13:06:22 GMT

View Forum Message <> Reply to Message

Ann Webber writes:

> I am plotting contours over a map and I was wondering if there was a
> way of filling the contours so that I can still see the map
> underneath? i.e. I want to be able to see country boundaries
> underneath the filled contours. Is there a colour table that contains
> sone transparent colours? Or is this completely impossible to do?

Typically, the country boundaries are placed on
top of the filled contours so they can be seen
(I.e., the Map_Continents and/or Map_Grid commands
are used after the Contour command).

But it is possible to make semi-transparent colors by
pixelating the colors, so that only half of them are
drawn, allowing the colors underneath to show through.
You can see an example in this article:

   http://www.dfanning.com/tips/color_overlay.html

But this would be a heck of a lot of work for a
filled contour plot, and I'm not sure the results
would justify the effort. The country lines are
almost sure to look too washed out.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: transparent colours for filling contours?
Posted by ngls on Wed, 15 Aug 2001 13:03:46 GMT

View Forum Message <> Reply to Message

I've done vaguely similar things trying to blend a solid-colour (bitmap)
image with a grey-scale image, such that the grey-scale would show through.

I did this by creating the two plots separately, taking (bitmap) images of the plots, converting these plots to HSL colours (from RGB colours) and then modifying the "L" (lightness) value of the colour image.

For instance, you could multiply the L values by 1.5 (say) to wash out the colours (if need be) and then divide by the grey-scale image to darken the colour image where the plot lines were drawn. If you had blacks or dark colours in the colour image you might have to add a constant (0.25 say) to the L values to wash out the colours, and then check for L>1.0

Of course, this only works with bitmap images of the plots and so restricts print quality. No doubt you could do all this much more directly with object graphics (no pun intended).

The code below might give you an idea of what I mean.

Good Luck.

Justin

```
PRO test_colour_merge
 ;Merges a black and white plot, with a colour image

 DEVICE, DECOMPOSED=0

 ;Make some data to plot
 z = SHIFT(DIST(50,50), 25, 25)
 z = SIN(z*2*!PI/max(z))
 x = FINDGEN(1000)*2*!PI/1000

 LOADCT, 0 ;Load grey-scale colours
 ;The COLOR value determines how dark/light the plot lines appear
 PLOT, x, SIN(x), BACKGROUND=255, COLOR=64
 img_grey = TVRD()

 ;Now do the colour
 LOADCT, 34 ;load rainbow colors
 SHADE_SURF, z ;Could probably use IMAGE keyword
 img_colour = TVRD(True=1) ;get the true-colour values

 ;Convert RGB colours to Hue, Lightness, Saturation
 COLOR_CONVERT, img_colour[0,*,*], img_colour[1,*,*], $
 img_colour[2,*,*], newH, newL, newS, /RGB_HLS


 ;newL = newL * 1.5 ;Wash colours by multiplication
 newL = newL + 0.25 ;Wash out colours by addition
```

```
newL = newL * (img_grey/255.) ;Darken where the plot lines are
;newL = newL / (img_grey/255.) ;Lighten plot lines

;Check for L>1.0 in case of L addition
list = WHERE(newL GT 1.0, count)
if count GT 0 THEN newL[list]=1.0

;Convert back to RGB ready for display
COLOR_CONVERT, newH, newL, newS, R, G, B, /HLS_RGB

LOADCT,0 ;return to grey-scale ready for true-colour
DEVICE, DECOMPOSED=1
;Display the latest image
TV, [R,G,B], TRUE=1

END
```

ahw199@soton.ac.uk (Ann Webber) wrote in
<b73826cc.0108140426.18c18654@posting.google.com>:

> Hi,
> I am plotting contours over a map and I was wondering if there was a
> way of filling the contours so that I can still see the map
> underneath? i.e. I want to be able to see country boundaries
> underneath the filled contours. Is there a colour table that contains
> sone transparent colours? Or is this completely impossible to do?
> Regards
> Ann Webber