## Subject: Re: density color schemes in IDL8 scatterplots Posted by Paul Van Delst[1] on Wed, 11 Jul 2012 15:58:35 GMT

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Hello,

On 07/11/12 10:22, patrickdgriffiths@gmail.com wrote:

> Hi,

>

- > does anyone know if there is any way to use density color schemes for scatterplots using the new IDL8 PLOT functions?
- > As this is a standard in ENVI scatterplot visualization, I would be surprised if it was not possible using IDL8
- > graphics. I could not find anything so far, however... Thanks,

I will assume you mean a density map, or pdf, when you say "density color scheme". If not, ignore the following.

I recently had to do just this.

After creating a graphics window, referenced in a structure as gData.wref, and my own RGB colour table, referenced in an array called "rgb\_table", this is how I display the image:

```
; Compute the 2-D histogram for x-y scatterplot data
qc_nbc_hist_2d = HIST_2D(x, y, BIN1=x_binsize, BIN2=y_binsize, $
               MIN1=x_min, MAX1=x_max, $
               MIN2=y min, MAX2=y max)
; Determine the x- and y-axis vectors
hist info = SIZE(qc nbc hist 2d, /STRUCTURE)
n x = hist info.DIMENSIONS[0]
n_y = hist_info.DIMENSIONS[1]
x_{locations} = x_{min} + FINDGEN(n_x)*x_{binsize}
y_locations = y_min + FINDGEN(n_y)*y_binsize
; Display the axes for the 2-D histogram image
pi = PLOT([x_locations[0], x_locations[n_x-1]], [y_locations[0], y_locations[n_y-1]], $
      /NODATA. $
      TITLE='insert title here', $
      XTITLE='insert xtitle here', $
      YTITLE='insert vtitle here', $
      CURRENT=gData.wref)
; Determine scaling factors for image
```

result = pi.CONVERTCOORD( pi.xrange, pi.yrange, /DATA, /TO DEVICE )

I do think this is a rather obtuse way of displaying an image with useful, numbered axes and I was going to post to this

newsgroup on how to do this in a "better" way. Well, a more intuitive way at least.

I think the image should be "axis-aware" so the user doesn't have to dick around with the whole CONVERTCOORD thing. And

it may be that there is a way to do that.... but I sure as hell couldn't find out how from the IDL documentation.

cheers.

paulv