
Subject: Re: Advice on making a plot

Posted by [David Fanning](#) on Mon, 17 Nov 2003 19:25:16 GMT

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Lawrence Bleau writes:

> Hello, I'm running IDL 5.2 on OpenVMS 7.1-2. And no, I cannot upgrade, as
> IDL isn't made for VMS any more :-(This is about design advice, though,
> not a problem.
>
> I've been tasked with writing code to create a plot of values. I'm given
> a 2-dimensional array of values, which are bins. The bins are the same
> size in each dimension, but different in the x- and y- dimensions; i.e.,
> each bin is a rectangle when viewed in the x,y space.
>
> I'm familiar with the plot command, and have an idea how to go about
> writing IDL code to shade individual rectangles different colors in
> specific locations on the plot field:
> for i=0,n-1
> for j=0,m-1
> translate x(i), y(i) to plot coordinates
> calculate corners of rectangle
> shade rectangle appropriate color
> endfor
> endfor
> One caveat: the final bin in each coordinate (along right and top edges) is
> larger than the other bins, so its rectangle will be of a different size.
>
> I'm thinking, though, that this operation is a bit inefficient and might be
> better accomplished by treating the array of values as an image and using
> some image display commands. How would this be done, though, with
> non-square pixels? That's just the first problem. The second is the
> different sized rectangles along the right and top sides. There may be
> other problems to address which would make an image approach unwieldy.
>
> Let me know your thoughts. Thanks.

This shouldn't be too hard, although slow if you
have a lot of points. Then, of course, there is the VAX... :-)

Here is an example:

PRO Example

Device, Decomposed=0

x = [0.0, 1, 2, 3, 4, 6]

y = [0.0, 1, 2, 3, 4, 6]

Plot, x, y, /NoData

FOR j=0,N_Elements(x)-2 DO BEGIN

```
FOR k=0,N_Elements(x)-2 DO BEGIN
  TVLCT, Fix(Randomu(seed,1)*255), Fix(Randomu(seed,1)*255), $
    Fix(Randomu(seed,1)*255), 255
  Polyfill, [x[j], x[j], x[j+1], x[j+1], x[j]], $
    [y[k], y[k+1], y[k+1], y[k], y[k]], $
    Color=255
ENDFOR
ENDFOR
END
```

Cheers,

David

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