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Subject: Re: Multilayered plots

Posted by [David Fanning](#) on Tue, 02 Aug 2005 18:28:03 GMT

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Hrafnkell writes:

> Every six hours i have to plot around 600 pictures from meteorological  
> data (actually skewt diagrams) for weather forecast on the internet so  
> efficient plotting routines are very desirable. Currently each picture  
> is made in two phases, first a background is plotted (axes and some  
> lines in the cartesian plane) with one routine and then that background  
> is overplotted with another routine. The thing is that the background  
> is the same for all of the pictures and it takes some time to plot so  
> it's kinda stupid to plot it 600 times.  
>  
> You can see the pictures here  
> <http://www.os.is/~or/vedurspa/serkort.html> by clicking one of the  
> diamonds. The latter routine overplots the two fat irregular lines  
> (blue and red).  
>  
> How can I weasel out of plotting the background every time? A routine  
> which cleans specific parts of the display seems utopic...I tried to  
> save the background as .png picture and then plotting the image with  
> Craig Markwardt's plotimage routine. That was quite a lot faster but i  
> was still plotting the background every time and besides, the  
> background didn't look good at all (i presume that partly explains the  
> speed-up)

I'd use smoke and mirrors. That is to say, a pixmap and "DEVICE, COPY"

Plot your background on a pixmap window that is the same size as your  
"display window":

```
WSet, displayWindow  
Window, /Free, /Pixmap, XSize=!D.X_Size, YSize=!D.Y_Size  
pixmapID = !D.Window  
Plot, backgroundStuff, ....
```

Then, when you are plotting your display windows, copy the background  
from the pixmap:

```
WSet, newDisplayWindow  
DEVICE, Copy=[0, 0, !D.X_Size, !D.Y_Size, 0, 0, pixmapID}  
Plot, newStuff...
```

This is about 1000 times faster than TVing the image, and  
probably 10,000 times faster than what you are doing now. :-)

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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