Subject: Quickly Erasing lines on direct graphics images
Posted by Richard French on Sat, 12 Nov 2005 15:18:49 GMT
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I have a Direct Graphics question. How can I quickly erase lines that I have drawn in displayed images?

For example, let's say I have a distant image of Mars and I want to draw my initial guess for the location of the outline of the planet. Based on what the guess looks like, the user will interactively adjust the location of the assumed center of the planet in the image (using slider widgets for the x and y offsets of the center location), and then redraw the outline of the planet. Once this looks 'good enough', an IDL routine will take over and do the final tweaking, but I need a reasonable initial condition to do the fit.

The question is, how can I keep track of the pixels that were drawn so that I can erase the initial lines and replace them with the next guesses, without having to redisplay the entire image? My students are running this program over the network, so it is very slow to redraw the image just to erase the points.

Here's an example in metacode of the slow way:

```
dx=0.0
dy=0.0
Xoutline=[some_array_of_pixel_locations]
Youtline=[another_array_of_pixel_locations]
AGAIN:
   Tvscl,MarsImage
   Plots,/DEV,Xoutline_+dx,Youtline+dy, THICK=2
   Read,prompt='Enter dx,dy offsets:',dx,dy
Goto,AGAIN
```

How can I avoid the TVSCL step in the loop?

Conceptually, one way to do this would be to figure out exactly what pixels are being affected by the Plots command (i.e., which pixels are involved in drawing the thick lines I've requested above) and restore them to the original values when I want to erase the lines, but I don't know how to do that step.

Thanks,
Dick French