Subject: Re: CURSOR skips a few beats :-(
Posted by cgguido on Thu, 28 Jan 2010 22:38:34 GMT
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On Jan 27, 4:29 pm, David Fanning <n...@dfanning.com> wrote:
> Well, you can do shapes easily enough just by connecting
> the dots. For example, in AnnotateWindow you can choose
> a pencil cursor and draw whatever shape you like (if you
> have any drawing talent, of course). You just can't get
> ALL the points the cursor crosses over. I don't think
> object graphics will help in this case, either. You will
> have learned them for nothing. :-)
>

Right, you can join the dots... so when IDL plots the line between the dots, it calculates which pixels need to turn white. How do I get the coords of all those pixels?

I have come up with a three-step linear interpolation that I do between each pair of points and it seems to be working (with 2 probs). here is a snippet:

```
pro dlines

f_xsize = 300
f_ysize = 300

map = bytarr(f_xsize, f_ysize,2)*0b

FOR line = 0, 1 DO BEGIN
  cursor, d1, d2, /down, /device
  device, cursor_standard = 32
  !mouse.button=0
  x1 = 0 > d1 < f_xsize-1
  y1 = 0 > d2 < f_ysize-1
  WHILE (!MOUSE.button NE 4) DO BEGIN
    plots, x1, y1, /device, ps = 3, color = fsc_color((['green',
'red'])[line])
    map[x1,y1, line] = 1b
    oldx = x1
    oldy = y1
    CURSOR, X1, Y1, /device,1
    x1 = 0 > x1 < f_xsize-1
    y1 = 0 > y1 < f_ysize-1

    dx = abs(x1-oldx)
    dy = abs(y1-oldy)
    l = sqrt((dx)^2+(dy)^2)
```

```
    IF ~keyword_set(nointerpolation) AND l GT sqrt(2) THEN BEGIN
      IF dx EQ 0 THEN BEGIN            ; if I need to interpolate
a vertical segment
        xx = indgen(dy)+min([y1, oldy]) ;new x's
        yy = round(interpol([x1, oldx], [y1, oldy], xx))
        map[yy,xx, replicate(line, n_elements(xx)) ] = 1b
      ENDIF ELSE BEGIN                ; all other orientations
        xx = indgen(dx)+min([x1, oldx]) ;new x's
        yy = round(interpol([y1, oldy], [x1, oldx], xx))
        map[xx,yy, replicate(line, n_elements(xx)) ] = 1b

        ;;need to do this for certain diagonals
        IF dy NE 0 THEN BEGIN    xx = indgen(dy)+min([y1,
oldy]) ;new x's
          yy = round(interpol([x1, oldx], [y1, oldy], xx))
          map[yy,xx, replicate(line, n_elements(xx)) ] = 1b
        ENDIF
      ENDELSE
    ENDIF
  ENDWHILE
  w = where(map[*,*,line] EQ 1b)
  a = array_indices(map[*,*,line], w)
  device, /cursor_crosshair
ENDFOR

END

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
```

Problem #1: it is not very pretty, but I could live with that I suppose. Though I feel there must be a better way.

Problem #2: when you (slowly!) move the mouse out of the left edge of the window the program crashes because x1= 0>x1<f_xsize-1 sets x1 to -1!!! And I can't figure that one out :-(

> P.S. Even using the pencil tool in something like Photoshop
> you see that if you move your pencil fast you get a straight
> line, while if you move it slowly you can get a nice even
> bend in the line. I think this is a function of your
> medium (a computer) and not a function of your art skills.
>

Hmm... I am not sure where you're going with the above. I hope the first part of this reply and the code clarify my issues...

Thanks,
Gianguido