Subject: Re: Text size weirdness
Posted by Antonio Santiago on Tue, 07 Jun 2005 07:24:13 GMT
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Michael Wallace wrote:
> I have encountered a strange problem and I am at a loss to explain it. I
> am using IDLgrWindow::GetTextDimensions with an IDLgrAxis and am getting
> results that I don't expect. I have a plot with axes and other
> annotations and I'd like to calculate the "bounding box" around all the
> objects. The left bound of the box is determined by the Y axis and the
> bottom bound of the box is determined by the X axis. I'd prefer that
> this value be calculated rather than hard-coded.
>
> Anyway, I am consistently calculating bounds that are too small. I can
> always see part of the axis text, but never all of it. I've put
> together an example that shows what I'm trying to explain. In my
> example, I use a 1 x 1 viewplane and [0, 1] axis data ranges so there
> aren't any coordinate transformations to gum up the works. I also have
> both axes pass through the origin.
>
> I had thought that if I got the X dimension of the Y axis text and
> subtracted that from 0, I would get the left bound on the Y axis text.
> The same goes for the X axis. If I got the Y dimension of X axis text
> and subtracted that from 0, I would get the bottom bound on the X axis.
> But, this doesn't work! I'm able to see part of the text, but never
> all of it. Despite the various approaches I've tried so far, it remains
> very consistent -- the "clipping line" seems to be in the same relative
> position. It always shows just a little over half of the text.
>
>
> ; Setup objects and note the 1 x 1 viewplane
> window = obj_new('idlgrwindow')
> view = obj_new('idlgrview', VIEWPLANE_RECT = [0, 0, 1, 1])
> model = obj_new('idlgrmodel')
> xaxis = obj_new('idlgraxis', 0)
> yaxis = obj_new('idlgraxis', 1)
>
> model -> add, xaxis
> model -> add, yaxis
> view -> add, model
> window -> SetProperty, GRAPHICS_TREE = view
>
> ; Set the tick text to recompute dimensions automatically
> xaxis -> GetProperty, TICKTEXT = xtt
> yaxis -> GetProperty, TICKTEXT = ytt
> xtt -> SetProperty, RECOMPUTE_DIMENSIONS = 2
> ytt -> SetProperty, RECOMPUTE_DIMENSIONS = 2
>

> ; Get the dimensions of the axes
> xdims = window -> GetTextDimensions(xaxis)
> ydims = window -> GetTextDimensions(yaxis)
>
> ; On my system I see the following values:
> ; print, xdims, ydims
> ;   1.0357957   0.032621843   0.0000000
> ;   0.037679673   1.0326218   0.0000000
>
> ; Reset the viewplane to show all of the axis text
> view -> SetProperty, VIEWPLANE_RECT = [-ydims[0], -xdims[1], 1, 1]
>
> ; When drawn, part of the labels are clipped off! What's going on?
> ; I thought I had positioned the viewplane at the edge according to
> ; to the text dimensions!
>
> window -> draw
>
>
> By the way, I reset the viewplane only because that was the easiest way
> for me to demonstrate the problem. The viewplane size didn't change and
> the data ranges were always [0, 1], so I can't figure out why
> GetTextDimensions gives me numbers that are too small. When I add
> titles to the axes, the same thing happens, except it's the titles
> rather than the axis labels that get sliced off.
>
> Have I made a wrong assumption about how GetTextDimensions works? Or
> how IDLgrAxes work? Or how IDL works? Any idea of why this happens and
> how to fix it? I just want to know where the axis text is. Is that too
> much to ask? Why can't the answer just be 42?
>
> -Mike

Ok, this is the goog message :) My last canceled messge (visible at
google groups was I bit stuppid XD)

Well, try to get the location for axis text and add to it sizes. This
works for me.

```
; Get the dimensions of the axes
xdims = window -> GetTextDimensions(xaxis)
ydims = window -> GetTextDimensions(yaxis)

; On my system I see the following values:
; print, xdims, ydims
;       1.0357957     0.032621843       0.0000000
;     0.037679673       1.0326218       0.0000000
xtt->GetProperty, LOCATIONS=lx
```

ytt->GetProperty, LOCATIONS=ly

xdims[1] += ABS(lx[1,0])
ydims[0] += ABS(ly[0,0])

; Reset the viewplane to show all of the axis text
view -> SetProperty, VIEWPLANE_RECT = [-ydims[0], -xdims[1], 1, 1]

--

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