
Subject: Re: Text size weirdness

Posted by [Antonio Santiago](#) on Tue, 07 Jun 2005 07:10:59 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 -> SetProperty, TICKTEXT = xtt
> yaxis -> SetProperty, 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

```

Hi, I'm testing your code and something is wrong. Try to create your axis with NOTEXT keyword set and show it dimensions. Are the same ??

--

```

-----
Antonio Santiago Piñeres
( email: santiago<at>grahi.upc.edu      )
( www: http://www.grahi.upc.edu/santiago )
( www: http://asantiago.blogspot.org   )
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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:

```
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> am using IDLgrWindow::GetTextDimensions with an IDLgrAxis and am getting
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> 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.
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> 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.
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> model -> add, xaxis
> model -> add, yaxis
> view -> add, model
> window -> SetProperty, GRAPHICS_TREE = view
>
> ; Set the tick text to recompute dimensions automatically
> xaxis -> SetProperty, TICKTEXT = xtt
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> xtt -> SetProperty, RECOMPUTE_DIMENSIONS = 2
> ytt -> SetProperty, RECOMPUTE_DIMENSIONS = 2
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> ; Get the dimensions of the axes
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```

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> 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 message (visible at google groups was I bit stupid 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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Subject: Re: Text size weirdness
Posted by [Michael Wallace](#) on Tue, 07 Jun 2005 16:09:09 GMT
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> Well, try to get the location for axis text and add to it sizes. This
> works for me.

Well, it looks like I totally misunderstood the documentation. I had thought that if you called `GetTextDimensions` with an axis, the little buffer area between the axis and text would be included. However, I now see that the dimensions are only that of the text. *sigh* Well, at least now I know.

-Mike

Subject: Re: Text size weirdness
Posted by [Antonio Santiago](#) on Wed, 08 Jun 2005 07:39:02 GMT
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Michael Wallace wrote:
>> Well, try to get the location for axis text and add to it sizes. This
>> works for me.
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>
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> Well, it looks like I totally misunderstood the documentation. I had
> thought that if you called GetTextDimensions with an axis, the little
> buffer area between the axis and text would be included. However, I now
> see that the the dimensions are only that of the text. *sigh* Well, at
> least now I know.
>
> -Mike

Well, I learned the same lesson as you thanks to this post ;)

--

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