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Subject: Re: Object Graphics fonts

Posted by [Karl Schultz](#) on Wed, 09 Jun 2004 21:35:22 GMT

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"Michael Wallace" <mwallace.no.spam@no.spam.swri.edu.invalid> wrote in message news:10cervakueidj58@corp.supernews.com...

>>> Maybe someone out there can explain this. It seemed that the appearance  
>>> of a Y axis annotation would change depending on the size of the strings  
>>> in the text labels. For example, when one of my plots had a yrange of 0  
>>> - 50, the Y axis text looked really good. However, if I made a plot  
>>> where the data range was past 100, the position of the Y axis would get  
>>> pushed over as expected. However, the rendering of the text would  
>>> degrade tremendously. The thing that I couldn't understand was why the  
>>> text would change in appearance just because it was rendered in a  
>>> different location.

I think I explained this before. It isn't the location, it is the scaling of your model space, and that's what the bug (fixed for 6.1) was about. Actually, I can't be certain because I can't tell from your post if you changed the range from [0, 50] to [0, 100] or to [50,100]. If the former, then the size of the range has changed, and that may have been enough to cause the quality problem.

>> Ah, I think what has been happening to you is that  
>> you were changing the scale of the Y axis after you  
>> created it. But you weren't recomputing new text properties  
>> after doing so. This could indeed make the text appear "ugly".  
>> I recommend you set the RECOMPUTE\_DIMENSION keyword to 2 on  
>> all of your text objects (including those you get from the axis  
>> itself with TICKTEXT). That should solve a lot of problems for  
>> you. :-)

>  
> Thanks, David. Setting RECOMPUTE\_DIMENSION didn't really seem to change  
> that much. The text now looks the same no matter where it gets  
> positioned because of the tick labels, however it doesn't look much like  
> the equivalent text written directly on the model. So, the mysterious  
> text changing has been solved, but the text still doesn't look right.  
> Is this due to some ordering/creation problem that may exist in my code?

Probably not.

One thing you can try is setting the RENDER\_METHOD property to 1 on your axis text objects. The bug I mentioned above had to do with computing the size of the glyph box that Freetype uses to render the glyph. If the box is miscalculated to be too small, the glyph quality will decline. Setting RENDER\_METHOD to 1 goes back to the pre-6.0 method of tessellating the glyph outlines into a lot of small triangles and drawing those. This method had its own problems, the biggest being naive anti-aliasing of the glyph

outlines. You can just try it to see how it looks.

- > Could you (or anyone else) explain a little bit about how object
- > graphics really work in this regard? Specifically, what gotchas are
- > present if a keyword is set in the object instantiation rather than being
- > set afterwards via SetProperty?

Should be none. Any property interactions should be documented.

- > What about the order of adding objects
- > to a model and then setting other properties of the object? For
- > example, say I have an IDLgrModel and add an IDLgrAxis to it. I then
- > choose to set something via SetProperty of the IDLgrAxis. Could this
- > potentially cause a different image to get drawn than if I had set all
- > of the properties before adding the axis to the model?

No.

- > Of course, there's the issue of making sure things are added to the
- > model in the correct order, especially when you have an IDLgrImage (the
- > topic of another recent thread),

Right, the drawing order depends on the order of the objects in the Model.

Note that there are IDL\_Container (a superclass of IDLgrModel) methods that let you move/shuffle objects around in a model. Also, the IDLgrModel::Add method has a POSITION kw that lets you insert objects into the model in places other than the end. So, it isn't strictly the order in which things are added to the model that determines drawing order, but the final order of the objects in the model at the time of the draw.

- > but are there any other ordering
- > problems or anything else that the object graphics novice such as myself
- > wouldn't know about?

Transparency - there are other threads about this, but if you have specific questions, ask.

- > I'm sure there's plenty I don't know, but the Top
  - > 10 Object Graphics Gotchas might help me and some other aspiring object
  - > graphics programmers.
  - >
  - > -Mike
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