Subject: Object graphics axis
Posted by Karri Kaksonen on Fri, 22 Oct 1999 07:00:00 GMT
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I just came back from Davids course about object graphics and it occured to me that a reason why positioning the axis objects is so difficult is that the range depends on the location of the axis.

The manual says that the range of the axis is set by a vector:

[-Xmin/(Xmax-Xmin), 1/(Xmax-Xmin)]

This may work if the length of the axis is 1.0 in normalized coordinates. In the course I chose the length to be 2.0 and in order to get it right I just tried out different values until I found it to be closer to:

[-1-Xmin*2/(Xmax-Xmin), 2/(Xmax-Xmin)]

I thought about this on my flight home last night and what I am afraid of is that the -1 in the first element may actually depend on where the axis is drawn on the screen. My location of the axis was at [-1.0, -1.0]. If this is the case then RSI should do something about it before version 5.3 comes out. Otherwise you have to update the range vector every time you reposition the axis.

If somebody understands what is going on, please drop a line.

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Regards,

Karri Kaksonen

Subject: Re: Object graphics axis
Posted by Pavel Romashkin on Fri, 29 Oct 1999 07:00:00 GMT
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> Lets just be realistic: IDL object graphics is a pretty toy, which might be
> useful for drawing scenes etc, but for real scientific data it's the
> proverbial heap of donkey dung.

I tend not to use strong language on the net and would just say that I disagree. Drawing time axes is not the only scientific application I can think of. I use IDL object graphics for what I consider scientific data and find it very flexible, easy to use and fast (on Power PC). It is pretty indeed and for the data I display the only viable alternative would be DF's "direct object

graphics".

> I would not like to try to write (for
> example) a routine to time label an arbitrary axis which might be anything
> from 2 minutes to 20 years in length with object graphics.

It may or may not be hard to do. It would probably be even harder to draw this
kind of thing accurately with a crayon - but it does not yet give a reason to
call crayons donkey dung.

To be short: if you dislike something it does not mean its useless or bad.

Cheers,
Pavel

Subject: Re: Object graphics axis
Posted by davidf on Fri, 29 Oct 1999 07:00:00 GMT
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James Tappin (sjt@star.sr.bham.ac.uk) writes:

> Lets just be realistic: IDL object graphics is a pretty toy, which might be
> useful for drawing scenes etc, but for real scientific data it's the
> proverbial heap of donkey dung.

Oh, quite the contrary. For real scientific 3D data
it is fabulous. Although "donkey dung" would not
be the way I would characterize its 2D capability,
I will concede it is less useful for 2D graphics.
But, then, why would you be using it for 2D graphics
anyway? Almost everything you want to do can be
done (often better) in direct graphics.

> I would not like to try to write (for
> example) a routine to time label an arbitrary axis which might be anything
> from 2 minutes to 20 years in length with object graphics. [Anyone who wants
> to see how its done in direct graphics (well; up to 10 years the externsion
> to 25 hasn't been released yet) should go to:
> http://www.sr.bham.ac.uk/hi-scale_help/routine_search.html

It couldn't possibly be any more convoluted in object
graphics, but I still say stuff it. Put this here
TimeBox thing into an object of its own and THEN
you will have something worth using! :-)

Cheers,

David

--
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Object graphics axis
Posted by James Tappin on Fri, 29 Oct 1999 07:00:00 GMT
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David Fanning wrote:

> After spending literally hours trying to make *real*
> data show up in object graphics plots I threw up my
> hands and threw myself on the mercy of the IDL
> programmers who wrote the code. They supplied me
> with an algorithm, which with a few slight modifications
> to make it actually work, reliably creates the
> translation and scaling factors necessary to place
> a real data range into a particular view.

Lets just be realistic: IDL object graphics is a pretty toy, which might be useful for drawing scenes etc, but for real scientific data it's the proverbial heap of donkey dung. I would not like to try to write (for example) a routine to time label an arbitrary axis which might be anything from 2 minutes to 20 years in length with object graphics. [Anyone who wants to see how its done in direct graphics (well; up to 10 years the externsion to 25 hasn't been released yet) should go to:
http://www.sr.bham.ac.uk/hi-scale_help/routine_search.html

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James Tappin	School of Physics & Astronomy	O__
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 +---+-- -------+

Subject: Re: Object graphics axis
Posted by James Tappin on Fri, 29 Oct 1999 07:00:00 GMT
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James Tappin wrote:

> David Fanning wrote:
>> example) a routine to time label an arbitrary axis which might be anything
> from 2 minutes to 20 years in length with object graphics. [Anyone who wants
> to see how its done in direct graphics (well; up to 10 years the externsion
> to 25 hasn't been released yet) should go to:
> http://www.sr.bham.ac.uk/hi-scale_help/routine_search.html
>
Ooops:
Then look up timebox

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 +----------------------+-----------------------------+-- -------+
James Tappin	School of Physics & Astronomy	O__
sjt@star.sr.bham.ac.uk	University of Birmingham	-- \/`
Ph: 0121-414-6462. Fax: 0121-414-3722	
 +---+-- -------+

Subject: Re: Object graphics axis
Posted by Mark Hadfield on Sat, 30 Oct 1999 07:00:00 GMT
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James Tappin <sjt@star.sr.bham.ac.uk> wrote in message
news:7vcaog$627$1@usenet.bham.ac.uk...
> Lets just be realistic: IDL object graphics is a pretty toy, which might
be
> useful for drawing scenes etc, but for real scientific data it's the
> proverbial heap of donkey dung. I would not like to try to write (for
> example) a routine to time label an arbitrary axis which might be anything
> from 2 minutes to 20 years in length with object graphics.

I have written (attempted to write?) reasonably versatile date & time axis routines in both Direct Graphics and Object Graphics and found it somewhat easier with Object Graphics. No, on second thoughts, much easier! With object orientation you can create an object, query its properties, adjust them etc and then wrap the result in a user-friendly, self-contained object. Direct Graphics routines for the same purpose tend to be less robust and to change the graphics system state in a way that can have unforeseen effects later.

But I'll have a look at timebox...

Mark Hadfield
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