
Subject: controlling plot appearance (was "line graph problems")

Posted by [Martin Schultz](#) on Tue, 27 Mar 2001 08:29:28 GMT

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Paul van Delst wrote:

- >
- > I disagree about that. Mostly because I'm lazy (I *really* dislike having to use
- > tremendously verbose code - full of stuff like determining the width of characters and
- > then lining stuff up by applying fractions of said width etc. - simply to label plot axes
- > and/or tick marks)

Well, it wasn't that bad ;-) The axgap routine only uses the tickname keyword, so it leaves quite a bit to IDL still.

- > Yeah, but recently I have come to the conclusion that IDL is not mature enough to allow me
- > absolute control in a simple, intuitive way of plot properties (note that the qualifier
- > "simple" eliminates OG :o) as opposed to some other proprietary plotting package (like,
- > for e.g., Grapher or Surfer).

You speak "out of my heart" here. And this is exactly the reason why David went ahead recently to develop a graphical tool to set up plot properties. Since it concentrates on getting the correct values for the myriad of plot keywords, it is not necessarily more "intuitive" than these, but at least you get "instant gratification" in that you can see what effect a keyword setting has. But if you are a little more "anal" in the way things should look (this is a quote from several posts of David), there is really no way around messing with character sizes and positions - and here, IDL (at least in direct graphics) does a rather lousy job in providing the user with reasonable defaults or an easy reference frame. What is clearly missing, I think, is a "panel" coordinate system which would have "normal" coordinates with respect to a plot, not to the entire window or page. Otherwise you spend hours figuring out the normal coordinates for certain labels, and then when you want to combine this plot with others or if you want to change the aspect ratio e.g. for a publication, you need to redo the whole thing. It also annoys me that you always have to work "against" IDL if you want to take control of label sizes etc. Just turn on !P.Multi with more than 2 panels in any direction, and you will have to apply a fudge factor of 1.62 in order to keep the labels legible when the composite plot shall be projected. This stinks. Character sizes should also have three "coordinate systems": absolute sizes (to be given in pt, pc, cm, mm, in, etc.) and relative size with respect to (a) the entire window or page and (b) the panel [for axis labels, plot titles, etc.]. Other programs also know units of "1em" or "1ex". Sure, this would imply a major change in IDL as we know it (although I think it could be done without too much loss in compatibility), but it would make life so much easier!! And this is at the very heart of - as you rightly say - one of IDL's fundamentals: visualisation. Now, I haven't looked to what

extent object graphics is going this way, but I fear that - at least up to version 5.4 - it has not become easier to tightly control the plot appearance if you use object graphics.

Cheers,

Martin

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