Subject: Object graphics questions and comment
Posted by Paul van Delst on Fri, 08 Aug 1997 07:00:00 GMT
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Hello,

I'm in the process of writing a viewer for atmospheric absorption spectra - the data files of which often contain 1000's of spectra. I decided to use IDL object graphics for a number of reasons:

- makes it easy to do zoom boxes
- makes it easy to do overplotting on resizeable window (sort of like David Fannings XWINDOW but without the need for a wrapper)
- makes it easy to add annotation
- in the words of Mr. Fanning, makes me look like an "up-to-date and with-it IDL programmer".

Anyway, I create a zoom box on a left button down event, add it to my plot_model and draw the resulting view (info_ptr is a pointer to the info structure ala D.F. and is stored in the user value of the top level base) :

```
  (*info_ptr).zbox = obj_new( 'IDLgrPolygon',
$
(*info_ptr).zbox_norm_xcoords, $
                        (*info_ptr).zbox_norm_ycoords, $
                        color = [ 0, 255, 0 ], style = 1 )
  (*info_ptr).plot_model -> add, (*info_ptr).zbox
  (*info_ptr).window -> draw, (*info_ptr).view
```

For motion events I do the following after updating the dynamic corner of the zoombox:

```
  old_zbox = (*info_ptr).zbox
  (*info_ptr).plot_model -> remove, (*info_ptr).zbox
  obj_destroy, old_zbox

  (*info_ptr).zbox = obj_new( 'IDLgrPolygon', $
                        (*info_ptr).zbox_norm_xcoords, $
                        (*info_ptr).zbox_norm_ycoords, $
                        color = [ 0, 255, 0 ], style = 1 )
  (*info_ptr).plot_model -> add, (*info_ptr).zbox
  (*info_ptr).window -> draw, (*info_ptr).view
```

Now all this works great. I get a lovely zoom box except IT IS SOOOOO SLOW? I test my code on a 1000 element data set and the zoom box can't keep up with the mouse motion events. Increase the number of points and it's unusable.

MY QUESTIONS: Is the snail pace response implicit of IDLs of object graphics (another e.g. IDLs Insight. Good lord) or is there another way to do this without having to do a
(*info_ptr).window -> draw, (*info_ptr).view
every time? In Direct Graphics you simply erase ONLY the box and then redraw ONLY the new box, you don't redraw the entire view. Can this be done using Object Graphics? The documentation is obtuse and unhelpful.

MY COMMENT: IMO, IDLs Object Graphics is necessary for easier programming of user friendly data visualisation tools. However, the speed of Object Graphics verges on being laughable (my perhaps poorly programmed example above notwithstanding). It is a step backwards and does not encourage the average IDL programmer (me) to utilise this powerful tool. My (hopeful) assumption is that future incremental releases of IDLv5 will contain Object Graphics that produce graphics as fast or faster than Direct Graphics.

Phew!

I'm curious - who out there are actually using IDLs Object Graphics capability?

regards,

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