
Subject: Re: plotting data as it arrives using objects
Posted by [Rick Towler](#) on Mon, 06 Jun 2005 17:22:31 GMT
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clive_cook wrote:

- > I am trying to write an object based program which collects lidar data
- > and plots the data as it arrives. I previously did this with direct
- > graphics plotting each profile as it arrived, which would produce a
- > contour plot. This was done by using the plots command and by scaling
- > the data with a chosen colour table using the BYTSCL command.
- >
- > I would like to do something similar with objects. I guess one way would
- > be to create a new profile using the idlgrplot object however we would
- > be collecting several thousand lidar profiles over several hours and i
- > can't imagine that you could create as many objects.

When it comes to plotting something like this in OG, you don't overplot.

You update your data and "draw". So you have your array of data which as it changes you'll pass to your contour object and then redraw.

Something like:

oContour -> SetProperty, DATA=myUpdatedData

oView -> Draw, oWindow

Or you could create a surface plot, which is what I think you're after... Whatever grObject you decide to go with, the concept is the same.

You may want to look at David Fanning's offerings. I know he has an example of an interactive surface plot in OG. It might be a good place for you to start.

Good luck!

-Rick

Subject: Re: plotting data as it arrives using objects
Posted by [clive_cook59](#) on Mon, 06 Jun 2005 20:24:48 GMT
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I think that the problem with this technique might be that each time a new file is written the contour will have to be re-calculated and re-drawn which considering the data can be a large 3-d array (4000x452x452) could make the program slow. I have yet to test this so i am not completely sure.

thanks

Clive

Subject: Re: plotting data as it arrives using objects
Posted by [Rick Towler](#) on Mon, 06 Jun 2005 21:37:56 GMT
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clive_cook wrote:

- > I think that the problem with this technique might be that each time a
- > new file is written the contour will have to be re-calculated and
- > re-drawn which considering the data can be a large 3-d array
- > (4000x452x452) could make the program slow. I have yet to test this so
- > i am not completely sure.

Well, I don't know exactly what you are doing so what do I know but...

I can't quite make the connection between your 4000x450x450 dataset and the plots you did in DG. What do you mean by this "contour" you created with plots? Is it 2d, is it 3d? How do you get from 4000x450x450 to your plot?

Regardless, with the proper hardware I doubt that OG would be a show stopper. I have found that for 3d plots using modern graphics hardware that except for very simple plots OG is always faster so the re-draw shouldn't be an issue (at least when compared to your DG application). As for the re-calculation part, what can I say. You are obviously minimizing the re-calculations in your DG application so why couldn't you do the same in the OG application?

But then again, I thought I sort of understood what you were plotting but your response makes me think otherwise. Maybe some more detail would help.

-Rick

Subject: Re: plotting data as it arrives using objects
Posted by [clive_cook59](#) on Mon, 13 Jun 2005 17:12:50 GMT
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Ok, i didn't do a good job of explaining myself. I've also done a little bit of research. Ultimately i'm looking to produce a contour plot (usually you can use the contour function in direct graphics or the idlgrcontour object). The idea is to produce this plot as data arrives, arriving approximately one profile every 2.5 seconds. Its a

slow inefficient way to re-calculate the contour so in direct graphics i drew one profile at a time onto a plot using the plots command and scaling the colours to the data values (so a series of these profiles produces a contour plot however it is drawn on the fly).

So now i am trying to do something similar with object graphics. I tried doing it by updating my data to the idlgrcontour object using `contour->setproperty,data_values=new_data` as new data arrives. The problem with this is as the `new_data` array increases in size the time taken to re-calculate the contour also increases, eventually it becomes far to slow. I'm looking for a way to do this in a more efficient way.

I hope this is clearer

many thanks

Clive Cook
