
Subject: Re: Selecting objects and PickData problem
Posted by [promashkin](#) on Thu, 10 Aug 2000 07:00:00 GMT
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I have used PickData in a very similar fashion as Richard wants to use it. I did not modify the point value but used point's exact location to go back to the process that created that particular point. I was unable to directly use the output of PickData method. Instead, I had to locate the point in my Plot data that was closest to the location returned by PickData:

```
x_loc_hi = (where(plot_data[0, *] ge return_XY[0]))[0]
x_loc_lo = (reverse(where(plot_data[0, *] le return_XY[0])))[0]
if abs(x_loc_hi - return_XY[0]) le abs(x_loc_lo - return_XY[0]) then $
  x_loc = x_loc_hi else x_loc = x_loc_lo
```

In my case, data were sorted and no Y search was necessary. More general approach would repeat this for the Y dimension, and Z too, I guess.

This way, I was able to extract the point I needed.

From here, it would be very simple to make that point "follow" the cursor (by turning ON drag events until mouse release and changing the value of the found plot point). However, given the fact that mousing on the plot area never seemed to hit the exact point I tried to hit, I am not sure I'd like to set my data points using this method, unless for some sort of initial guess.

I have a feeling that this uncertainty originates from PickData using input device coordinates to figure out if a click hit a plot. Then, if you happen to hit within some neighborhood of the plot object, PickData will return TRUE, although from the display device (which uses pixels) it can't tell what Plot value did you hit. Then PickData will return a value, probably corresponding to the center of that neighborhood, which is close to the value of Plot data point.

As you can tell, it is all pure speculation. But I used the workaround and it worked for me.

Cheers,
Pavel

Subject: Re: Selecting objects and PickData problem
Posted by [davidf](#) on Thu, 10 Aug 2000 07:00:00 GMT
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Richard Tyc (richt@sbrc.umanitoba.ca) writes:

- > I am trying to get object selection (and ultimately manipulation
- > interactively) to work properly without much success.
- >
- > I understand from previous postings and David Fannings example that the
- > method first requires:
- >
- > 1) perform a selObj = oWindow->Select (oView, [sEvent.x,sEvent.y])

> operation to get the list of objects which could be picked from.
>
> 2) Assuming my object of choice is in the list (I check on the NAME property
> for each object which I have previously assigned), I can then do something
> like
>
> pick = oWindow->PickData(oView, pickObj, [sEvent.x,sEvent.y], dataxyz)
>
> My problem is that the PickData method does work (ie. the right pickObj is
> found from the original selection list) but the actual data in dataxyz makes
> no sense!! My object of choice, an IDLgrPolyLine, is part of oModel
> contained in oView which has been transformed. I display the X,Y and Z axis
> on screen when I manipulate the Model (using oTrackball type interaction)
> but the PickData returns data outside my bounds ie. the entire polyline is
> within positive X,Y,Z but yet dataxyz returns negative positions ?
> Does dataxyz not have the correct transformed data ? Is there a bug here ?
>
> I am trying to allow the user to interactively grasp the end point of a line
> and modify its position by moving the mouse.

I don't know, Richard. I haven't tried this particular thing. But I do see a lot of caveats in the on-line help for the PickData method, including caveats that you may have to apply your own data transformations to these values. Have you read the documentation carefully?

Cheers,

David

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