Subject: Re: IDLgrWindow Pickdata on an IDLexObjView Obect.
Posted by m.hadfield on Mon, 11 Jun 2001 21:41:15 GMT
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> Does anyone have any suggestions on how to get the correct 3-D position
> using the Pickdata method for an IDLgrWindow object which is displaying an
> IDLexObjView. Pickdata correctly finds the objects but returns incorrect
> x,y,z values. I am trying to modify xplot3d.pro to return the x,y, and z
> coordinates of a IDLgrPolyline displayed using Orbs for each datapoint.

How are they incorrect?

I've never used an IDLexObjView before but I just coded up a short (and very crude!) test program and the PickData method seemed to give the right answers. The test program is below.

One odd thing that I noticed about IDLexObjView is that the Get method has been overridden (subverted?) so that it returns a reference to the atom it's displaying. I would expect a view's Get method to return the view's child model(s). Overriding a superclass's key method like this so it does something completely different is bad practice IMHO. The preferable way would have been to add another method, called something like GetAtom. (This may or may not be relevant to your problem. I wanted to look at the transformation matrices of the models in the IDLexObjView.To get at them I had to "Get" the atom then work up through the graphics tree. It turns out there are 4 models and all have an identity transformation matrix. This would change if the atom is manipulated by the mouse.)

Perhaps your problem is related to the fact that your 3D objects are attached to a polyline as symbols?

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```
pro mgh_test_idlexobjview

    ; Create a view object

    oview = obj_new('IDLexObjview')

    ; Create vertex & connectivity data for a sphere of unit radius

    n_vertices = 30
    mesh_obj, 4, vert, conn, replicate(1, n_vertices+1, n_vertices)

    ; Scale vertices & create spheroid object
```

```
   vert[0,*] = 0.5 * vert[0,*]
   vert[1,*] = 0.9 * vert[1,*]

   oatom = obj_new('IDLgrPolygon', DATA=vert, POLY=conn)

   ; Add object to view

   oview->Add, oatom

   ; Display

   owin = obj_new('IDLgrWindow', UNITS=0, DIMENSIONS=[500,500], RETAIN=2,
GRAPHICS_TREE=oview)
   owin->Draw

   ; Pick data

   if owin->Pickdata(oview, oatom, [200,200], xyz) then $
      print, 'Picked data at', xyz

   ; Skip remainder of code.

   return

   ; Check that atoms, [X,Y,Z]RANGE properties are as expected.

   oatom->GetProperty, XRANGE=xrange, YRANGE=yrange, ZRANGE=zrange

   print, oatom,xrange,yrange,zrange

   ; Get all of the atom's parent models and print their transformation
matrices.

   oatom->GetProperty, PARENT=omodel

   while obj_isa(omodel, 'IDLgrModel') do begin

      omodel->GetProperty, TRANSFORM=transform

      print, omodel, transform

      omodel->GetProperty, PARENT=omodel

   endwhile

end
```

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