Subject: Re: ellipsoid 3D
Posted by Jean H. on Thu, 03 Aug 2006 20:38:47 GMT
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adisn123@yahoo.com wrote:
> Could you answer
> how the following arrow expression works in IDL?
> ->

object -> method

you apply the method on the given object..

Jean

>
>
>
>
> Rick Towler wrote:
>
>> You didn't say if you wanted to do this in Direct Graphics (DG) or
>> Object Graphics (OG). You also don't give any details so I can't
>> suggest one over the other. Given that:
>>
>> For either OG or DG you need to create a set of points that define the
>> ellipsoid (the vertices) and an array that specifies how the points are
>> connected (the polygon connectivity array). Then you pass these data to
>> the appropriate function to "plot" your 3d ellipsoid.
>>
>> You could do this the hard way, by creating a function that would
>> calculate the vertices and create the connectivity array give your major
>> and minor axes and a position. Or you could do it the easy way :)
>>
>> IDL has the 'orb' object which creates a 3d sphere. Assuming you want
>> to do this using OG, it is a simple as creating the sphere and scaling
>> it asymmetrically.
>>
>> ; create the orb object
>> IDL> orb = obj_new('orb', color=[240,0,0], style=1)
>>
>> ; since it is a subclass of IDLgrModel we can scale it.
>> ; stretch the sphere out 2x it's original length along the z axis
>> IDL> orb -> scale, 1, 1, 2
>>
>> ; view the result
>> IDL> xobjview, orb

```
>>
>>
>> If you need to do this in DG, you can still use the orb object:
>>
>> ;  get the vertices, polygon connectivity, and transform matrix
>> ;  from the orb object.  Even though you are looking at an ellipsoid
>> ;  the verts will still define a sphere.  The orb's transform matrix
>> ;  holds the key to scaling the vertices such that they define an
>> ;  ellipsoid.
>> IDL> orb -> getproperty, data=verts, polygons=polys, transform=xform
>>
>> ;  apply the transform matrix to the spherical verts to make them
>> ;  ellipsoidal
>> IDL> dgVerts = vert_t3d(verts, matrix=xform)
>>
>> ;  display using DG
>> IDL> scale3, xrange=[-2,2],yrange=[-2,2],zrange=[-2,2]
>> IDL> image=polyshade(dgVerts,polys, /t3d)
>> IDL> tv, image
>>
>> I am aware that this DG code displays a "solid" sphere.  I never do 3d
>> in DG so this is the best I care to do.  Others might offer tips for
>> displaying 3d objects in DG if you really want to suffer thru this in DG.
>>
>> HTH!
>>
>> -Rick
>>
>>
>> adisn123@yahoo.com wrote:
>>
>>> Hi,
>>>
>>> I'm a begginer in IDL image processing, so if someone lends me some
>>> help, that'd be great.
>>>
>>> I'm trying to make an ellipsoid in 3D.
>>>
>>> Not solid, but hollow ellipsoidal in 3D.
>>>
>>> Anybody help?
>>>
>
>
```