Subject: Need help in Volume manipulation
Posted by Alvin Das on Sat, 15 Apr 2006 13:41:21 GMT
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Hi group,
I have a 3D-array filled with an 3D object. I want to rotate the object within the array about an arbitrary line say, y=2x=3. Currently I am rotating the object by rotating each plane of the array, for example I did:

for i=0, xside-1 do cube[i,*,*]=ROT(cube[i,*,*],45)

to rotate the object by 45 degrees. At this stage I want to rotate the object about the line y=-x, but don't know how to do that. Any ideas?

Alvin

Subject: Re: Need help in Volume manipulation
Posted by Rick Towler on Thu, 20 Apr 2006 15:36:40 GMT
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Alvin Das wrote:

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> object about the line y=-x, but don't know how to do that. Any ideas?

Why do you need to transform your data in data space? It is trivial to do it in visualization space using /T3D or IDLgrModel transforms.

If you really need to do it the hard way, without checking the literature I would suggest converting the indices of your 3d cube into a 3xN array and transform that (using VERT_T3D or IDLgrModel). Then you would have to associate your intensity values with the transformed index locations and use them to interpolate values back into your 3d array.

There have to be better ways of doing this though. I would use your favorite web search tool to find an algorithm for doing this in the 2d case (i.e. ROT) and go from there.

-Rick