Subject: Re: Supose this...
Posted by cgguido on Thu, 24 May 2007 19:14:19 GMT

On May 24, 1:38 pm, David Fanning <n...@dfanning.com> wrote:
> Folks,
>
> Alright, suppose this.
>
> Suppose I wanted to build a 3D transparent globe, with
> continental outlines, major cities, etc. displayed on it.
> And suppose I wanted to stick a sphere in the center of
> the globe with pointy bits sticking out of it. (Think of
> of those medieval weapons that the Visigoths swung from a chain to
> bash in the skulls of their enemies.) I'd like to see where the
> pointy bits stick out of the globe. (Please don't ask
> me why.)
>
> Would IDL be the software you would use to do this?
> Would I run into the "pimento problem" with the back
> side of the globe?
>

I have only started playing around with it, but perhaps VRML (virtual
reality markup language) could do the trick...

Don't have any particularly insightful links to share beyond the first
few hits on g00gle though :-(

Gianguido

PS: Let us know what you find out about it! Sounds interesting!

Subject: Re: Supose this...
Posted by Vince Hradil on Thu, 24 May 2007 19:56:09 GMT

On May 24, 12:38 pm, David Fanning <n...@dfanning.com> wrote:
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> Just thinking out loud. :-)
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> Cheers,
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> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

How about POVRay?

Subject: Re: Supose this...
Posted by cgguido on Thu, 24 May 2007 21:58:34 GMT

On May 24, 3:56 pm, hradilv <hrad...@yahoo.com> wrote:
>
> How about POVRay?

yeah, though POV-ray is slow and non interactive in comparison to
VRML. Of course if you want super realistic/detailed images, then it's
a good option.

Gianguido

Subject: Re: Supose this...
Posted by Rick Towler on Thu, 24 May 2007 22:34:51 GMT

Ahhh, the pimento problem. Makes me think of that little bit with Nigel
Tufnel complaining about the deli tray before the show in Cleveland...
(http://www.imdb.com/title/tt0088258/) I'm still waiting for a renderer

that provides z-order independent alpha blending but until then you
certainly can do this.

If you are simply going to be rotating the globe (similar to my
camdemo_examine program) you can cheat, the semi-opaque earth surface
doesn't have to be transformed. Just transform the coastlines, cities,
and your mace.

You can actually cheat for a number of cases but if you *really* need to
rotate the earth orb you'll need to slice your outer orb up into 4
quarters using MESH_CLIP (Your task is easier since you'll not be
texturing your outer globe.) Then you dynamically order the quarters so
the proper rendering order is maintained.

-Rick

David Fanning wrote:
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> David

Subject: Re: Supose this...
Posted by Michael Galloy on Thu, 24 May 2007 23:20:53 GMT
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On May 24, 11:38 am, David Fanning <n...@dfanning.com> wrote:
> Folks,
>

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> continental outlines, major cities, etc. displayed on it.
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How about:

```
interiorSphere = obj_new('orb', radius=0.1, $
                 alpha_channel=0.5, $
                 color=[255, 0, 0])
globe = obj_new('orb', radius=0.2, $
          alpha_channel=0.2, $
          color=[0, 0, 255])


vertices1 = [[0, 0, 0], [0, 0, 0.1], [0.3, 0, 0]]
polygons1 = [3, 0, 1, 2]
spike1 = obj_new('idlgrpolygon', vertices1, $
          polygons=polygons1, $
          alpha_channel=0.5, $
          color=[0, 255, 0])


vertices2 = [[0, 0, 0], [0, 0, 0.1], [0.212, 0.212, 0]]
polygons2 = [3, 0, 1, 2]
spike2 = obj_new('idlgrpolygon', vertices2, $
          polygons=polygons2, $
          alpha_channel=0.5, $
          color=[0, 255, 0])


omodel = obj_new('idlgrmodel')
omodel->add, interiorSphere
omodel->add, spike1
omodel->add, spike2
omodel->add, globe
xobjview, omodel
```

I think if "globe" where the only transparent object it would be
pretty good.

By the way, I've been impressed with VTK. For something similar to your problem, how about these two shots:

   http://michaelgalloy.com/wp-content/uploads/2007/05/vtk-left .png
   http://michaelgalloy.com/wp-content/uploads/2007/05/vtk-righ t.png

These are screenshots from an interactive trackball-type application and I'm not doing any manual sorting of polygons. (Yes, POV-Ray is awesome, but it takes me a while to everything setup just right and it's definitely not interactive.)

Mike
--
michaelgalloy.com

Subject: Re: Supose this...
Posted by KRDean on Fri, 25 May 2007 14:13:09 GMT
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How about the new IDLgrShader Objects in IDL 6.4.

 It supports the OpenGL Shading Language, which has plenty of White, Red, Green, and Orange Books to get you started.

Kelly Dean
Fort Collins

On May 24, 11:38 am, David Fanning <n...@dfanning.com> wrote:
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Subject: Re: Supose this...
Posted by warner.pete on Fri, 25 May 2007 19:09:46 GMT
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On May 25, 9:13 am, kBob <KRD...@gmail.com> wrote:
>   How about the new IDLgrShader Objects in IDL 6.4.
>
>   It supports the OpenGL Shading Language, which has plenty of
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>
> Kelly Dean
> Fort Collins
>
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Hurray, an opportunity to link back to what I consider my most useful
post:
http://tinyurl.com/27h4fl

That contains some code that should create a wireframe globe of the
continents. I've used it with a solid sphere with a slightly smaller
diameter to create a functional globe model. It was my first object
graphics project though and I'm sure there are better ways to do it.