Subject: Re: mesh clipping
Posted by Dick Jackson on Mon, 26 Aug 2002 23:01:30 GMT
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lyubo,

"lyubo" <lzagorch@cs.wright.edu> wrote in message
news:akbaskqgr1@mercury.wright.edu...
>
> I have three planes and a mesh. The mesh represents an object which I
want
> to cut with the planes and show either of the remaining parts (like
> thecutting planes of IDLgrVolume).

If I understand you correctly, you want to apply three general clipping planes to a mesh and show what is left after the three cuts. (that's what IDLgrVolume does, for any number of planes you might wish)

> To do that I clip the mesh to all of the planesand
> take the union of the remaining meshes, but it takes a lot of time to
> mergethem.

This part confuses me a little. I would suggest to start with the whole mesh, clip with one plane, then clip the resulting mesh with the second plane, then clip that resulting mesh with the third plane. It looks to me more like an *intersection* of three sub-spaces than a *union*, but it can be done sequentially like this, rather than combining separate results.

Perhaps I've misunderstood, but I hope this helps.

Cheers,
--
-Dick

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Subject: Re: mesh clipping
Posted by Rick Towler on Tue, 27 Aug 2002 16:46:50 GMT
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"lyubo" <lzagorch@cs.wright.edu> wrote

> In general, can I draw a plane in IDL which will cover the front part of
the

> mesh without clipping it, or is there any other way of doing that?

Sort of. You can set up your view such that it clips your mesh, and then adjust the eye property until you are viewing it from the deired distance (or you can adjust the viewplane rectangle, or you can use my camera and simply adjust the zoom). You may not see what you are expecting depending on the way your mesh was drawn though.

As for the other way, if you are going to be slicing your mesh up interactivly *and* your hardware can render your full mesh quickly consider using an alpha channel to "hide" parts of your mesh instead of removing them. This should be significantly faster.

As I hinted to above, the order in which the mesh is rendered is very important when clipping with the view or using alpha blending. You must draw the mesh starting with your -z verts and draw torwards +z. Google this group for "Pimento Problems" for the full explanation.

The trick will be setting up your texture_coords...

> Also, why IDLgrVolume is so slow?

Most likely your graphics adapter isn't designed to accelerate the rendering of volumes.

-Rick

Subject: Re: mesh clipping
Posted by lyubo on Wed, 28 Aug 2002 12:35:46 GMT
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Rick, you were right. I really want to slice the mesh up interactively and that's why I was trying to clip it to a plane. I guess alpha blending will be faster but the question that I have here is how can I use alpha blending with a mesh? I thought that I can apply alpha blending only to texture mapped polygons, by using an alpha image as texture. With the mesh I don't have any texture. I will try to find examples on the net, I just wanted to thank you for your reply.

As far as my graphics adapter, I use Nvidia GeForce3 on a P4 2.0GHz dual processor with 512Mb Ram platform. Which graphic adapters support rendering of volumes?

Thanks,