
Subject: Re: point inside/outside of 3D object.
Posted by [Wout De Nolf](#) on Mon, 20 Jun 2011 13:49:09 GMT
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On Fri, 17 Jun 2011 12:47:36 -0700 (PDT), Karl
<karl.w.schultz@gmail.com> wrote:

> I'm not sure you'd want to draw a tet with an ROI. A tet can be drawn
> with a grPolygon. You would supply the 4 verts and then the
> connectivity list which would be something like:
>
> [3,0,1,2, 3,1,0,3, 3,2,1,3, 3,0,2,3]
>
> The order is important to make all the faces facing "out". If any of
> these are wrong, reverse the order. E.g., if the last tri is facing
> the wrong way, change 3,0,2,3 to 3,3,2,0.

Could you elaborate on that?

I understand that the normal vector on each triangular face of the polyhedron should point outwards. So if you take the three vertices of a triangle, they should be ordered so that when using the "right-hand rule", the normal points outwards.

Lets mark the vertices of a tetrahedron Red, Green, Blue and Gray (<http://tinypic.com/r/513fau/7>). So the ordered vertices for each triangle should be
back: Red-Green-Blue (equivalents: Green-Blue-Red, Blue-Red-Green)
front-right: Red-Gray-Green
front-left: Red-Blue-Gray
bottom: Green-Blue-Gray

So how do the quadruples come into play?
