
Subject: Re: Check if a point is inside a polygon mesh
Posted by [cartik.sharma](#) on Fri, 19 Aug 2005 01:32:28 GMT
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If the mesh is horribly non-convex, (and I believe it would be based on the description of the unstructured grid is..), it would be a good first step to calculate the convex hull of all points in the mesh using the quick convex hull procedure, QHULL and then checking if the point lies inside the convex hull using ray clipping. The qhull will also reduce the time taken to perform calculations.

-Cartik

photosalex@freenet.de wrote:

> Hello, All!
>
> Does anybody know a way to figure out if a 3D point lies inside a
> closed 3D triangular polygon mesh. The mesh is a tricky engineering
> construction of thousands of vertices with holes, stems, supports etc.,
> rather than a rectangular slab.
>
> The question arose basically from the task to find the coordinates of
> the intersection(s) of a ray with an arbitrary volumetric IDL model.
> I've searched the newsgroups but couldn't find a ready answer.
>
> If anyone provides me with information on either problems, I'd be very
> grateful.
>
> Cheers!
