Subject: Re: Points in a rectangle with an angle
Posted by Rick Towler on Wed, 05 Apr 2006 16:58:26 GMT
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This is the classic point in polygon test. There are two common approaches, the crossing test and the winding test. You can google this for the specifics but here are a few pages to get you started:

http://softsurfer.com/Archive/algorithm_0103/algorithm_0103. htm

I've used this in the past:

http://www.ecse.rpi.edu/Homepages/wrf/Research/Short_Notes/p npoly.html

There are probably ways to IDLize this but I implemented this in a DLM so I never gave it any thought.

I would suggest a 2 stage approach:

first do your rough cull using WHERE to get a subset of points that *may* be in your polygon. Then do the fine cull with a point in polygon test of your choosing. You have a pretty simple case (2d, 4 vertex polygon) so you could get away with a pretty simple test.

-Rick

JJMeyers2@gmail.com wrote:
> Hello,
>
> I have a problem in IDL that I was wondering if anyone has any idea how
> it can be done.
> I have a set of coordinates and I am trying to figure out how many of
> the coordinates are inside a rectangle. I know the coordinates of the 4
> edges of the rectangle but the problem is that the rectangle is at an
> angle in the x,y axis (I know the slope). I can not just say
> coords=where((x LE xmax) AND (x GT xmin) AND (y LE ymin) AND (y GT
> ymax))
> because that will give me coordinates of a rectangle without an angle
> (parallel to the y axis).
> Is there any function in IDL that might be doing that?
>
> Thank you,
> JJM.
>