Subject: Medial Axis/Ridge Detection
Posted by Ted Cary on Thu, 18 Apr 2002 15:46:31 GMT
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Hello,

Has anyone written or come across IDL routines that find the medial axis of a 2D shape? A Google search of the newsgroup for "medial axis" turned up next to nothing, only one poor post that never became a thread, which is not promising.

I've started writing a routine myself to do this by finding the "ridges" in a Euclidean distance map made from a mask of the filled shape. It seemed like the easiest approach, but I'm having problems optimizing the ridge detection algorithm which I got from the web. I'm looking for an efficient way to find "curves" of local maxima in the distance map, hopefully something clever like what Craig Markwadt and JD came up with last year for finding local maxima in 1d vectors.

I'm not married to the distance map approach. It was the most intuitive simply because in distance map pictures the medial axis is so visible to the human eye, if not to my algorithm (yet). Are there advantages to the Voronoi cell border approach or to the bi-tangent circle approach that I should be aware of?

Thanks for any help,

TC