Subject: Fast Marching Algorithm
Posted by James[2] on Fri, 21 May 2010 16:20:46 GMT
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Has anyone implemented (or attempted to implement) Sethian's Fast Marching Method in IDL? I'd like to use it to compute wave front propagation in a scalar field. Here's a description:
http://math.berkeley.edu/~sethian/2006/Explanations/fast_mar ching_explain.html

The algorithm generally uses a binary heap to keep track of the narrow band of neighbor *xels for the current wave front boundary. It also loops around the list of current boundary *xels. With all that looping and linked data structures, it seems like IDL might not run it so quickly.

Matlab has this, and it seems like a pretty widely used algorithm. I'm surprised IDL doesn't have it built in. If there's no preexisting IDL implementation, I'll write a C program and post it here for anyone who's interested.

(*xels = {pixels, voxels})