CISC 868 Fall 2011
Week 7

October 31, 2011

The Medial Axis

The medial axis can be used to represent the internal skeleton (and possibly an external exo-skeleton) of an object. The definition of the medial axis a polygon P is the closure of the set of points that have at least two simultaneously closest points on the boundary of P. A very simple $O(n^2)$ algorithm for computing the medial axis of a convex polygon was given. Svetlana Stolpner presented the material and followed the text book very closely.

The notion of a the medial axis in two dimensions can be extended to higher dimensions. Svetlana showed us some applications of the three dimensional medial axis that is her own work and from her PhD thesis.