The Research of Applying Neural Network to Polygonal Approximation

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ABSTRACT

In this thesis, we applied the Competitive Hopfield Neural Network (CHNN) to polygonal approximation and 2-D image contour recognition. At first, we searched the feature points, the position of feature points where are included high curvature and corner on the contour. We used polygonal approximation to describe the image contour. There have two patterns we set, one is model pattern another is test pattern. The CHNN was employed to perform feature matching. In the application of this method, we can apply it to radar track smoothing, stock market analysis and polygonal approximation.

Keywords : Competitive Hopfield Neural Network ; polygonal approximation ; radar track smoothing

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