Abstract

In this paper we propose a novel approach towards shape matching for image retrieval. The system takes advantages of generalized Hough transform, as it works well in detecting arbitrary shapes even in the presence of gaps and in handling rotation, scaling and shift variations, and solves the heavy computational aspect by introducing a preliminary automatic selection of the appropriate contour points to consider in the matching phase. The numerical simulations and comparisons have confirmed the effectiveness and the efficiency of the method proposed.
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**Index Terms**

Computer Science  
Pattern Recognition
**Keywords**

Hough Transform  Image Retrieval  Dominant Point  Polygonal Approximation  Shape Matching