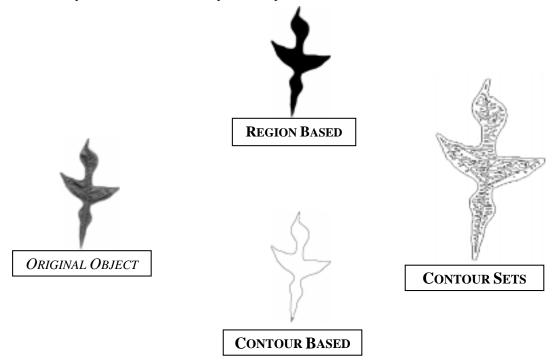# A Project for Recognition Through Contour Sets

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Abstract. This work discuss an ongoing project that has been developed in order to investigate a new approach for object recognition in computer vision systems based on contour sets. This approach tries to take advantage of the two classical paradigms of shape analysis, namely, region-based and contour based. The traditional contour based approach to shape analysis concentrate on the extration of a single outline that represents the object shape. Complex objects, like faces, are generally not treated within this paradigm, for internal information (e.g. eyes and mouth) is crucial for recognition. In our approach, the object is represented by a set of parametrized contours (hence, 1-D data), and statistical measures that capture 2-D region information are extracted from this contour set. We conjecture that future developments of this approach will allows to address non-standard problems for contour techniques (e.g. texture) with contour tools (e.g. parametric curvature). It is worth emphasizing that the proposed approach is not merely edge based vision, for parametric contour techniques are explored.

REGION BASED

ORIGINAL OBJECT

CONTOUR BASED

CONTOUR SETS

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