PART−BASED SHAPE RETRIEVAL WITH RELEVANCE FEEDBACK
(WedPmPO1)

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Abstract :
The retrieval problem we consider is the following: given a large collection of images of polygonal shapes and a query polygon, we want to retrieve those shapes in the image database that ``share'' some parts with the query polygon. In our approach, the database polygons are decomposed but the query polygon is not. In an initial search in the database, the database polygon parts are matched against the query polygon. The best matches are shown to the user, who has to decide which are relevant to its query. In successive iterations, the system tries to infer from the user's feedback which parts of the query are of interest, and makes a search with those parts only. We compared our part−based relevance feedback approach with a global shape matching technique, based on a curvature scale space representation (CSS) of the shape, which has one of the best reported retrieval rates on this test set, and was therefore selected to be part of the MPEG7 definition.