# Object-level structured contour map extraction

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**Abstract**

A new approach is proposed to extract an object-level structured contour map from the junctions in a 2D image. Local junction structures are paired in order to initialize and globally constrain the contour extraction process. An original optimization method is applied to detect and describe the contours in respect of their inherent shape and structure. Any given contour is described using a proper number of constant-curvature primitives according to the complexity of its shape. The contour map produced is represented as a graph. The characterized contours correspond to the edges of the graph and their topological structure is described by the junctions at the vertices. An elaborated experimental evaluation illustrates the capabilities of the proposed approach in demanding situations.

**Author Keywords:** Contour map extraction; Junction-based structure; Global fitting; Graph representation; Constant-curvature primitives.