

Retrieving Similar Segmented Objects Using Motion Descriptors

Authors : Konstantinos C. Kartsakalis, Angeliki Skoura, Vasileios Megalooikonomou

Abstract : The fuzzy composition of objects depicted in images acquired through MR imaging or the use of bio-scanners has often been a point of controversy for field experts attempting to effectively delineate between the visualized objects. Modern approaches in medical image segmentation tend to consider fuzziness as a characteristic and inherent feature of the depicted object, instead of an undesirable trait. In this paper, a novel technique for efficient image retrieval in the context of images in which segmented objects are either crisp or fuzzily bounded is presented. Moreover, the proposed method is applied in the case of multiple, even conflicting, segmentations from field experts. Experimental results demonstrate the efficiency of the suggested method in retrieving similar objects from the aforementioned categories while taking into account the fuzzy nature of the depicted data.

Keywords : fuzzy object, fuzzy image segmentation, motion descriptors, MRI imaging, object-based image retrieval

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