

A new approach based on the edge examination has been developed for the detection of polygonal structures as an alternative to MSERs and Harris points. The recognition of objects with a uniform surface was the initial motivation. The detected polygonal structures can be used as supplementary features for the nonuniform object recognition as well. Finally, the method has been tested on the real application of the viewpoint invariant car license plate detection. The main contribution of our approach is the ability to detect polygons regardless to their size, number of vertices and orientation. The polynomial time complexity for low polygon degrees allows our method the real-time performance. Moreover, the searching algorithm can be modified to find more types of polygons at a time very easily.