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International Journal of Computer Applications

© 2012 by IJCA Journal

Volume 40 - Number 10

Year of Publication: 2012

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10.5120/5001-7283

{bibtex}pxc3877283.bib{/bibtex}

Abstract

The tracking of moving objects in a video sequence is an important task in different domains such as video compression, video surveillance and object recognition. In this paper, we propose an approach for integrated tracking and segmentation of moving objects from image sequences where the camera is in movement. This approach is based on the calculation of minimal cost of a cut in a graph “Graph Cuts” and the 2D parametric motion models estimated between successive images. The algorithm takes advantage of smooth optical flow which is modeled by affine motion and graph cuts in order to reach maximum precision and overcome inherent problems of conventional optical flow algorithms. Our method is simple to implement and effective. Experimental results show the good performance and robustness of the proposed approach.

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Computer Science

Index Terms

Multimedia

Keywords

Graph Cuts Motion Models Tracking Video Analysis Overlapping Objects.