

***Abstract: A Video Scene Extraction Method for Object Recognition using Optical Flow***

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**Abstract**

Automatic video scene extraction is the first step toward semantic understanding of video for the object recognition. This paper presents an effective video scene extraction method for the object recognition based on the optical flow technique. In order to extract the feature points of initial frame, the Harris Corner Detector algorithm which is based on local autocorrelation measuring change of local signal is used. We can acquire feature points of initial frame by finding local maxima of the corner map and the location of feature points in next frame is tracked using The Optical flow algorithm proposed by Lucas-Kanade. According to movement of the camera, visible area of specific object also move to invisible area and these can be outlier. We remove the outlier by using the RANSAC algorithm and make decision whether it is final scene image by measuring the frequency of exactly registered feature point based on specific threshold. Experimental results show that video scenes of object can be extracted in various viewpoints of camera.