A Texture-Based High Speed Moving Object Detection Method

黃雅軒,歐志鴻,謝祥文,游鴻修
Computer Science & Information Engineering
Computer Science and Informatics
yeashuan@chu.edu.tw

Abstract

This paper presented a moving object detection method based on texture information extracted on images. Every image captured from the camera is converted into Local Binary Pattern (LBP). Salient features extracted from previous LBP are compared with those features found from current LBP with block matching approach so that corresponding features from successive image frames can be identified. If multiple correspondences exist between feature points, the motion vectors of each feature points are then calculated to determine the best corresponding features on current LBP. Finally, with classifications of motion vectors, all the moving objects on image frames can be successfully detected and identified. Experimental results show that the average matching accuracy rate is 95.12%, and the average processing time for moving object detection is 46.2ms.

Keyword：Block matching, clustering, feature point detection, object segmentation, motion vector