An Efficient Approach for Real Time Tracking of Intruder and Abandoned Object in Video Surveillance System

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Abstract

Abandoned Object Detection and Intruder detection is one of the important tasks in video surveillance system. This paper proposes an integrated approach for the tracking of abandoned and unknown objects using background subtraction and morphological filtering. The aim of the approach is to automatically recognize activities around restricted area to improve safety and security of the servicing area by multiplexing hundreds of video streams in real time. The tracking module takes as input per camera tracking and recognition results and fuses these into object estimation. A novel algorithm for object tracking in video pictures, based on image segmentation is proposed. With the image segmentation all objects in images can be detected whether they are moving or not by using image segmentation results of successive frames. Consequently, the proposed algorithm can be applied to multiple movements. The algorithm was tested on real time video surveillance system and it produces very low false alarms and missing detection. This approach definitely provides security and detects the moving object in real time video sequence and live video streaming.

References
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Index Terms

Computer Science
Multimedia

Keywords

Background Subtraction   Blob analysis   Morphological Filtering