Abstract

Now a day's object tracking is more difficult and tricky to surveillance in real time. This proposed work deals with the tracking of moving object in a sequence of frames and it also determines the velocity of the object. In this work algorithms are developed for improving the image quality, segmentation, feature extraction and for identifying the velocity. The algorithms developed are implemented and evaluated using MATLAB. The image quality of the video frame is obtained by applying certain noise removal filters. Next, identifying the moving objects from the portion of the video frame is performed using the background subtraction technique based on frame difference. The object tracking is performed by optical flow with Bayesian boosting algorithm method on detected object in each frame as a feature extraction method. There are several papers describing the accomplishment of optical flow. Some results are adequate, but in many projects, there are restrictions. In most preceding applications, because the camera is typically static, it is simple to apply optical flow to identify the moving targets in a scene and get their trajectories. When the camera moves a global motion will be added to the local motion, which complicates the issue. In this work we used the combination of boosting algorithm called Bayesian boosting is adopted to improve the performance of Optical flow (OFTBB). The distance traveled by the object is determined using its centroid pixel. It is calculated by using the Euclidean distance formula. Then the velocity of the object is calculated
by finding the object moved in distance in a sequence of frames with respect to the video frame rate.

References


**Index Terms**

Computer Science Image Processing
Keywords
Object tracking  Preprocessing  Segmentation  Feature Extraction  Tracking and Detection