Abstract

Tracking of motion objects in the surveillance videos is useful for the monitoring and analysis. The performance of the surveillance system will deteriorate when shadows are detected as moving objects. Therefore, shadow detection and elimination usually benefits the next stages. To overcome this issue, a method for detection and elimination of shadows is proposed. This paper presents a method for segmenting moving objects in video sequences based on determining the Euclidian distance between two pixels considering neighborhood values in temporal domain. Further, a method that segments cast and self shadows in video sequences by computing the Eigen values for the neighborhood of each pixel is proposed. The dual-map for cast and self shadow pixels is represented based on the interval of Eigen values. The proposed methods are tested on the benchmark IEEE CHANGE DETECTION 2014 dataset.


Index Terms

Computer Science  Image Processing

Keywords

Motion segmentation, Eigen values, Shadow detection, Shadow segmentation, Self shadow, Cast shadow.