Abstract

Identifying moving objects from a video sequence is a fundamental and critical task in many computer vision applications and a robust segmentation of motion objects from the static background is generally required. Segmented foreground objects generally include their self shadows as foreground objects since the shadow intensity differs and gradually changes from the background in a video sequence. Moreover, self shadows are vague in nature and have no clear boundaries. To eliminate such shadows from motion segmented video sequences, we propose an algorithm based on inferential statistical difference in mean (Z) method. This statistical model can deal scenes with complex and time varying illuminations without restrictions on the number of light sources and surface orientations. Results obtained with different indoor and outdoor sequences show that algorithm can effectively and robustly detects associated self shadows from segmented frames.

Reference


Index Terms

Computer Science

Computer Vision

Key words
Video surveillance

Motion segmentation

shadows

Inferential statistics

Difference in Mean

Critical values