Abstract

The growing security challenges raise the importance of research in the area of automated surveillance and tracking. Algorithms for real time video processing of aerial live videos can be very useful for meeting next generation surveillance needs. In this present work, a robust mechanism for extracting object and tracking in videos for surveillance purposes is presented. The proposed scheme uses a modified background subtraction algorithm, augmented with morphological processing. In first step the video is divided into a number of frames and performing histogram analysis on the frames, to extract background. To detect an object, each different frame is from the background is subtracted. Further, Morphological operations are applied to remove any unwanted shadows in the video frame. The object detected is also well tracked throughout its visibility in the frame. This method proves an accurate and efficient way even in absence of humans in such surveillance applications. The proposed algorithms are verified with simulation of detecting objects, tracking and labeling using MATLAB.


Index Terms

Computer Science  Security

Keywords

Foreground  Histogram Analysis  Object labeling  Dilation  Erosion.