Abstract

A background subtraction method is a computationally inexpensive way to identify moving objects in the scene without any prior information about object and it also provides a sufficient light of information to accomplish critical task in traffic monitoring, object tracking, pattern recognition, human gait and gesture detection. However, for real time systems, the background scene is seriously affected due to changes in lightening condition, shadow cast by moving object, swaying tree, rippling water and much more, which hurls to produce a reliable motion mask. In this concern, we focus toward the selection of the background pixel by mapping the time variance and absolute difference image in order to cope with abrupt illumination and preserve the spatial consistency. Further the local statistical properties and variance of background image are employed to reduce the local noise impulse within background candidate. Experimental results show that it can work well under static and dynamic background condition.

References

- Cutler, R., & Davis, L. S. 2000. Robust real-time periodic motion detection, analysis,
and applications. Pattern Analysis and Machine Intelligence, IEEE Transactions on, 22(8), 781-796.


Index Terms
Computer Science  Multimedia

Keywords

Background subtraction  Motion detection  Time variance  Segmentation  Morphology