Abstract

In this paper, a potential moving object modeling suitable for video surveillance correspondence is introduced. Taking into concern the color and motion features of foreground objects in each independent video stream, the proposed method segments the existing moving objects based on the edge detection method and constructs an intuitionistic fuzzy graph-based structure to maintain the corresponding information of every segment. Using such graph structures reduces our correspondence problem to a subgraph finest isomorphism problem. The proposed approach is robust against diverse resolutions and orientations of objects at each view. This system uses the Intuitionistic fuzzy logic to employ a human-like color perception in its decision making stage in order to handle color inconstancy. The computational time of the proposed method is made low to be applied in real-time applications. It also performs the similarity measure using the intuitionistic fuzzy logic based distance measure for computing the regions relationship.

References

- Automatic Segmentation of Moving Objects in Video Sequences: A Region Labelling
An Emphasizing Approach based on Enhanced Intuitionistic Fuzzy Logic Segmentation on Objects in Video Sequences

Yaakov Tsaig and Amir Averbuch

-  M. Aprile, A. Colombari, A. Fusiello, V. Murino, Segmentation and Tracking of Multiple Objects In Video Sequences
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Index Terms

Computer Science Multimedia

Keywords
Region adjacency graph Fuzzy graph Intuitionistic fuzzy subgraph isomorphism
An Emphasizing Approach based on Enhanced Intuitionistic Fuzzy Logic Segmentation on Objects in Video