AN EFFECTIVE ACTIVE-CAMERA MULTIPLEXING FOR MULTIPLE MOVING TARGETS TRACKING

Authors: Pakorn Sareekitkankhun, Pinit Kumbhom, Kosin Chamnongthai

In one-active-camera multiplexing for multiple moving-objects tracking, tracking and camera moving time needs to be less than inter-tracking time (the maximum time during consecutive tracking of the target) in order to keep tracking multiple targets and maintaining motion trajectory information of targets. This paper proposes target-grouping process and modified queuing process. In target-grouping process, we merge several targets, which are located in the same camera’s field of view into a group for decreasing the number of tracked objects. In queuing process, we consider distance of camera movement to determine priority of tracked objects that the expiration time (the time units from when the target was last tracked) is small enough. The simulation results show that the proposed methods can reduce 41.2% maximum of tracking time and 45.7% maximum of camera moving distance.