

Abstract: A Novel Method for Object Detection and Tracking in Compressed Domain

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Abstract

This paper proposes a novel moving target tracking algorithm in H.264/AVC compressed domain based on logical reasoning. Firstly, we employ the compressed domain motion detector to identify the target. Then a supposed target trajectory and the predicted position in the next frame are estimated according to the direction angle and the intensity within motion field. Finally the algorithm uses logic and reasoning analysis to determine whether the target is lost, halted or occluded which can be overcome by exploiting the direction angle and the intensity in motion field. The experimental results proved that the simple logic-based reasoning approach is of outperformance on both decreasing the loss rate and increasing the goodness of fit to real trajectory, having the ability to track a moving object accurately in commercial video surveillance systems.