

Feature-Point-Based Target Tracking in the Crowd

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Abstract

In order to detect each individual target in the crowded scenes, we propose a novel method to detect and track the individual target in the crowd. First, a coarse-to-fine individual segmentation approach based on the corner points' extraction and tracking is proposed. The dynamic feature points are roughly clustered by the C-means algorithm and then a spatial-temporal shortest spanning tree is proposed to segment each individual target in the moving group. Second, each segmented target is tracked with the concept of feature points' inheritance. The experimental results show that the accuracy of individual segmentation in the crowd can be higher than 90% and the efficiency of our system can approach 8 fps with D1 resolution.

Keyword : shortest spanning tree, corner points' extraction, individual segmentation