Distributed Spatial Transformer for Object Tracking in Multi-Camera

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***Abstract*—Today's video surveillance devices are almost ubiquitous and ready to collect data. Tracking targets in surveillance applications can be a challenging task. However, the work of manual surveillance is tiresome. A camera can only record information within the area it records, and that area is quite limited. Therefore, in order to monitor critical areas, it is necessary to setup many cameras in different places. As a result, personnel monitoring of all cameras remains a more difficult task. By re-identifying individuals captured by several cameras, this work presents a framework for tracking people in the presence of many cameras, while giving some potential methods to achieve fast people detection and tracking in multi-view cameras. By employing spatial transformations to achieve real-time multi-view tracking capability, the scheme is feasible and has been implemented.**

***Keyword*—STN, Distribution, Mulit-View, Person Tracking**

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