

## **A Tracking Based Traffic Performance Measurement System for Roundabouts and Intersections**

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### **Project Abstract:**

In this project, we propose to develop a tracking based traffic performance measurement system for roundabouts and intersections. There are two main goals for the project. One is to be able to collect all types of traffic performance measurements by tracking each individual vehicle and to improve performance measurement accuracy. The other goal is to focus on roundabouts and intersections as traffic performance measurements for these traffic scenes are in great need. To achieve these goals, we propose to design a new vehicle tracking algorithm based on state-of-art statistical approach of road modeling. The traffic performance measurements for roundabouts and intersections include vehicle volume, vehicle speed (including acceleration/de-acceleration behavior), origin-destination pairs, waiting time, gap size (by turning or entering vehicles) and lane use. The proposed traffic performance measurement system will be implemented in deliverable software and input to the software is offline video clips of the traffic scenes. The system will be extensively tested.

**Anticipated Duration of Project :** 12 months.