CAV News Bytes
Monthly newsletter on CAV-related developments & deployments
February 2024

University of Michigan pilot study shows reduced delay from low-volume CVs

A recent pilot project in Birmingham, Michigan has shown that traffic congestion at signalized intersections could be reduced by 20-30% with a relatively small number of connected vehicles (CVs) within the traffic flow. This 18-month pilot study by the University of Michigan utilized existing sensor data at signalized intersections and overlayed GPS data from CVs to extrapolate traffic patterns.

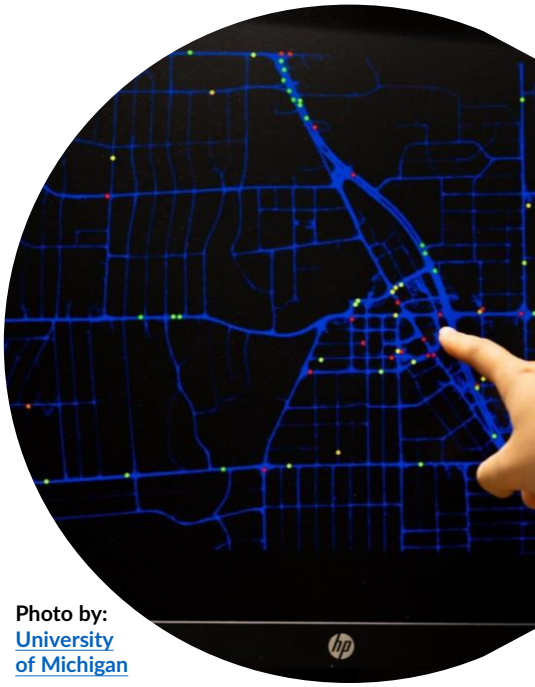

Photo by: University of Michigan

This analysis of CV GPS data can be used to adjust signal timings to improve an intersection's level of service (LOS) while also potentially reducing congestion and emissions. This data analysis could be utilized in older, fixed-time signal timing systems, and potentially reduce installation costs compared to switching to an adaptive traffic signal.

The CVs used in the study accounted for approximately 6% of the vehicles traveling through the intersection – illustrating that even a low-level penetration in the fleet could net sizable benefits for congestion reduction.

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CV services in municipal fleets improve vehicle performance and efficiency

Photo by: Samsara

Cities are implementing vehicle telematics across a wide variety of vehicles within their fleets. Deployments have utilized a diverse range of vehicles, including fire trucks, police cars, garbage trucks, and street sweepers, among others. The data collected helps the city's fleet managers to optimize routing. In addition, the data can help identify mechanical issues before parts fail, allowing mechanics to remedy problems before they could lead to unscheduled vehicle downtime.

As an example, city employees determined through telematics analysis that street sweepers were driving too fast on a beachside route to effectively remove debris. By halving their speed along the oceanside route, the sweepers were able to be more efficient at vacuuming. Similar data analysis from across in the municipal fleet led to a 20% reduction in idle time, 28% reduction in vehicle downtime, and 5% reduction in fuel consumption.

CAV News Bytes is a monthly publication that offers snapshots of some of the latest developments related to Connected and Automated Vehicles (CAVs) and CAV deployments. CAV News Bytes is developed by the Intelligent Transportation Society of America (**ITS America**) with support from the Connected Automated Vehicle Deployer Task Force.

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