Method and System for Automatic and Flexible Travel Path Identification for Large-Scale Vehicle Control at Intersections

Cloud-based system optimizing green time at intersections to cut delays and improve flow.

Researchers at Purdue University have developed a system that consumes traffic data to automatically determine vehicle movements and rebalance green time at intersections nationwide. Inefficiencies at traffic signals can be caused by broken sensors, outdated signal timings, or surges in demand. Delays experienced by drivers translate to societal costs. The methodology developed by Purdue researchers automatically generates traffic performance indicators that are actionable for operators and stakeholders, as well as offer recommendations to redistribute green time between movements of traffic signal systems. The flexible and automatic technology leverages big data in the cloud to uncover performance insights with future implications for the efficient and equitable operation of connected and autonomous driving.

Advantages

-Safety

-Efficiency

-Scalability

-Automatic identification

Applications

-Traffic Management and Operations

Technology Validation: Vehicular travel paths at over 3,000 intersections nationwide have been identified using the technology. Several intersections are undergoing field validation and green time rebalancing.

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Category

Automotive & Mobility
Tech/Mobility AI & Embedded
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