National Center for Sustainable Transportation

Project Information Form

Project Title:	Intelligent Parking Assist for Trucks with Prediction
University:	University of Southern California
Principal Investigator:	Petros Ioannou
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Funding Source(s) and Amounts Provided (by each agency or organization):	USDOT - $100,000
Total Project Cost:	$ 100,000
Agency ID or Contract Number:	USC-DOT-309
Start and End Dates:	1/1/2017 – 12/31/2017
Brief Description of Research Project:	This project investigates the truck parking problem in the US, and in particular California, and develops an intelligent parking assist system for trucks with prediction capabilities by taking into account the availability of information technologies, and modeling and prediction techniques. The researchers will use stochastic techniques to model the availability of parking at different locations, and will use these models to develop a prediction algorithm that will predict the availability of parking at the time of arrival of the truck. This predictive capability will allow trucks to plan their trips and rest breaks more efficiently than using a rule of thumb and past experience. The models will be continuously updated as new data become available by using current and future information technologies. The benefits of such a system on freight mobility, environment and GHG emissions, fuel economy and health will be considerable and efforts will be made to quantify them. The emphasis will be on the development of modeling techniques and prediction algorithms for truck parking availability. The researchers plan to address the feasibility of commercializing such a system based on available sensor and information technologies, and by taking into account other efforts on freight advanced traveler information systems to which our algorithms may be useful.

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Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	
Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links Reports Project website	https://ncst.ucdavis.edu/project/intelligent-parking-assist-for-trucks-with-prediction/