

<b>UTC Project Information</b>	
Project Title	LIDAR Based Vehicle Classification
University	The Ohio State University
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PI Contact Information	See above
Funding Source(s) and Amounts Provided (by each agency or organization)	\$26,171 NEXTRANS Center/USDOT \$59,035: The Ohio State University
Total Project Cost	\$85,206
Agency ID or Contract Number	DTRT12-G-UTC05
Start and End Dates	01/01/2013 - 12/31/2016
Brief Description of Research Project	Vehicle classification data are used in many transportation applications, including: planning, pavement design, environmental impact studies, traffic control, and traffic safety. Every state in the US maintains a network of vehicle classification stations to explicitly sort vehicles into several classes based on observable features, e.g., length, number of axles, axle spacing, etc. Various technologies are used for this automated classification, the three most common approaches are: weigh in motion (WIM); axle-based classification from a combination of loop detectors, piezoelectric sensors or pneumatic sensors; and length-based classification from dual loop detectors. All of these sensor technologies suffer from the difficulty of deploying and maintaining in/on pavement sensors. There has recently been an increasing interest in developing non-intrusive sensors to classify vehicles, e.g., there are several non-intrusive sensors now on the market that offer vehicle classification and most of these sensors rely on microwave radar (e.g., RTMS, SmartSensor, etc.).

	<p>The research will deploy LIDAR based system using high vantage points (10-30 m) at one or more multi-lane facilities to monitor traffic and overcome the current limitation due occlusions. In addition to algorithm development, the research will include extensive, labor-intensive ground truth data extraction, both for development and validation of the algorithms. The budget and scope of the work is for the task of developing the LIDAR based system.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	