

<b>UTC Project Information</b>	
Project Title	Characterizing Level 2 Automation in a Naturalistic Driving Fleet
University	Virginia Tech – Virginia Tech Transportation Institute
Principal Investigator	Miguel Perez (PI) & Jon Hankey (Co-PI)
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Funding Source(s) and Amounts Provided (by each agency or organization)	Safe-D UTC: \$370,000 NSTSCE: \$500,000
Total Project Cost	\$870,000
Agency ID or Contract Number	Grant No: 69A3551747115 Project: VTTI-00-024
Start and End Dates	08/10/2019 – 8/9/2021
Brief Description of Research Project	Dash video from the NOVA fleet collection effort, an on-going effort that will collect data from instrumented Society of Automotive Engineers (SAE) L2 vehicles, will be analyzed using machine vision to, combined with additional approaches that offer redundancy, determine the timing , and characteristics of L2 feature activations and deactivations. Subsequent analyses will leverage these data to examine the real-world patterns of use for these systems, environmental drivers of activations and deactivations, and compatibility between intended and actual operational domains.
Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	<ol style="list-style-type: none"> <li>1) Deliverables of the final report and dataset <ol style="list-style-type: none"> <li>a. The research team will submit a final report and a corresponding de-identified dataset will be published in the SAFE-D Dataverse</li> </ol> </li> <li>2) Education and workforce development plan <ol style="list-style-type: none"> <li>a. The completion of a Master’s degree by two students that will be supported by the project</li> <li>b. An undergraduate course module developed as part of this project. The module will include a sample analysis project using the summary dataset made publicly available via the Safe-D collection on the VTTI Dataverse.</li> <li>c. A STEM outreach activity targeting K-12 students. The activity will introduce K-12 students to the concept of big data resulting from automated vehicles.</li> </ol> </li> <li>3) Technology Transfer <ol style="list-style-type: none"> <li>a. The project will result in at least one publication and one conference presentation</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>b. Through Safe-D, the project team will host a webinar to present the results of the project to industry professionals, transportation researchers, and federal and state government representatives</li> <li>c. Based on the project, the team will produce a project brief/summary that will be available for download via the project page of the Safe-D website</li> </ul>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>The anticipated benefits of this project are to increase understanding of drivers' use of L2 features during real-world driving. Such information can yield improvements in driver use of the systems and in the design of the systems. The increased understanding will result from the development of a framework that details participants' use of ACC and LKAS features in the NOVA fleet dataset, including crashes and near-crashes.</p>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	<p><a href="https://www.vtti.vt.edu/utc/safe-d/index.php/projects/characterizing-level-2-automation-in-a-naturalistic-driving-fleet/">https://www.vtti.vt.edu/utc/safe-d/index.php/projects/characterizing-level-2-automation-in-a-naturalistic-driving-fleet/</a></p>