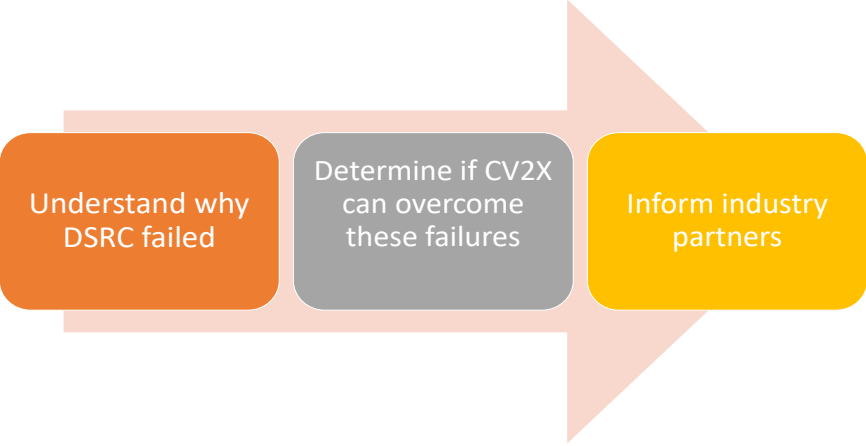




UTC Project Information	
Project Title	Reliable V2V Communication Networks: Applications in Fuel-Efficient Platooning
University	University of Michigan-Dearborn
Principal Investigator	Sridhar Lakshmanan (PI) Paul Richardson (co-PI)
PI Contact Information	Electrical & Computer Eng. Dept. 313-593-5516 313-593-5560 Lakshman@umich.edu Richarpc@umich.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	CCAT: \$115,712 College of Engineering: \$34,059 Mcity Tailored Funds (Ford): \$82,911
Total Project Cost	\$232,682
Agency ID or Contract Number	69A3551747105
Start and End Dates	05/01/2019 – 12/31/2020
Brief Abstract of Research Project	The application is multi-truck platooning - lead truck is manually driven, following ones are autonomous. Key is maintaining closer-than-normal gap distance, for drafting purposes, resulting in increased fuel efficiency. Vehicle-to-vehicle (V2V) communications between the vehicles enables autonomy - V2V failure impacts autonomy. Based on data collected from recent tests, PIs have identified specific use cases where V2V fails when using DSRC. This proposal addresses two follow-on research problems – (i) the cause of DSRC failure, and (ii) the ability of CV2X to overcome such failures. Further testing is proposed along with a modeling and simulation effort to understand the failure modes. Long-standing industry partners of the PI, Ford, will be informed of the results. Proposed research leverages already funded research from DOD and DOE which is focused on the demonstration of realizable fuel efficiency in long-haul trucks.
Most Relevant CCAT Research Thrusts	<input checked="" type="checkbox"/> Enabling Technology

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>Implementation plan:</p>  <pre> graph LR A[Understand why DSRC failed] --> B[Determine if CV2X can overcome these failures] B --> C[Inform industry partners] </pre>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Will measure the benefits and provide to CCAT when implementation is complete</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>ccat.umtri.umich.edu</p>