ROADWAY SAFETY INSTITUTE
Advancing roadway safety with user-centered solutions

UTC Project Information	
Project Title	Teen Driver Support System (TDSS) Field Operational Test
University	University of Minnesota
Principal Investigator	Max Donath
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Funding Source(s) and Amounts Provided (by each agency or organization)	ITS Institute SAFETEA-LU Central Admin Match: $32,800 ITS Institute SAFETEA-LU Dept Match: $9,054 ITS Institute SAFETEA-LU IT Dean's Match: $18,109 ITS Institute SAFETEA-LU RITA: $181,101 Minnesota Department of Transportation: $2,033,709
Total Project Cost	$2,274,773
Agency ID or Contract Number	UTC Grant Number: DTRT13-G-UTC35 MnDOT contract 99008 work order 17 CTS# 2012023
Start and End Dates	10/31/2011 – 01/31/2016
Brief Description of Research Project	*Final report abstract:* Although teen drivers make up a small percentage of the U.S. driving population, they are at an especially high risk of being involved in a crash. Factors that contribute to teen drivers' risk include their lack of experience and their tendency to engage in unsafe behaviors such as speeding, driving aggressively, or using a cell phone while behind the wheel. To help teen drivers stay safe on the road, we developed the Teen Driver Support System (TDSS), a smartphone-based system that provides real-time, in-vehicle feedback to teens about their risky behaviors—and reports the behaviors to parents via text message if teens don't heed the system's warnings. The TDSS provides geographically specific, real-time feedback to a teen driver at the time unsafe driving behavior occurs so that behaviors can be immediately corrected. This report documents a 12-month field operational test of the system involving 300 newly licensed teens driving on Minnesota roads. The test included a control group that received no feedback, a treatment group that received only TDSS in-vehicle feedback, and a second treatment group that received both TDSS in-vehicle and TDSS parental notifications. Research results indicate an overall safety benefit of TDSS, demonstrating that in-vehicle monitoring and driver alerts, coupled with parental notifications, is a meaningful intervention to reduce the frequency of risky driving behaviors that are

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	correlated with novice teen driver crashes. In particular, the system was shown to be an effective strategy for reducing excessive speeds when used with parental feedback and potentially even without parental involvement.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	This project has led to a follow-up project, "Teen Driver Support System (TDSS) Technology Transfer." It's being led by RSI research fellow Brian Davis, and being counted as match funding for the Institute. The goal of the project is to improve the smartphone app developed during the previous project, and eventually move towards commercialization. Please refer to the UTC project information form for "Teen Driver Support System (TDSS) Technology Transfer" to read further updates on this initiative. Dr. Nichole Morris has adapted the TDSS for older drivers and received positive responses from participants in a recent evaluation study. She has also worked with the UMN's Office of Technology Commercialization to engage an outside company to provide software support.
Impacts/Benefits of Implementation (actual, not anticipated)	Nothing to report yet.
Web Links • Reports • Project website	http://www.cts.umn.edu/Research/ProjectDetail.html?id=2012023 http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2530

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