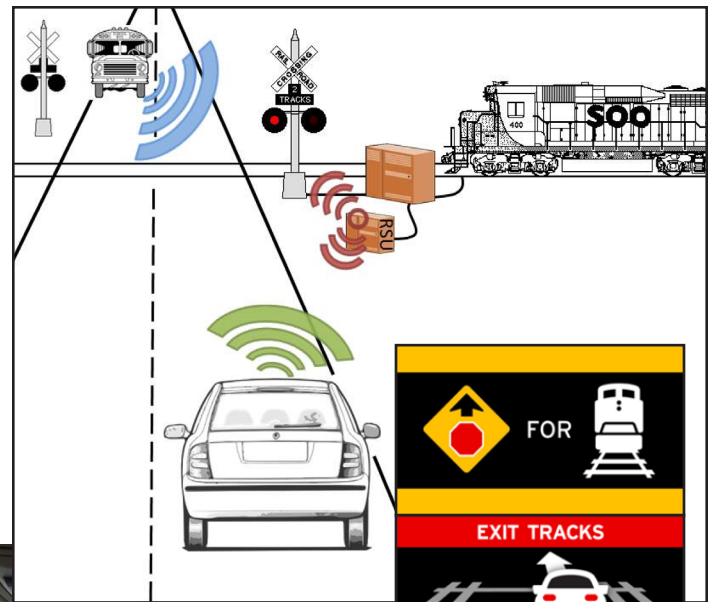


# Rail-Crossing Violation Warning (RCVW) System

A technology demonstration from the Federal Railroad Administration (FRA), Battelle and Michigan Technological University

Highway-Rail Grade Crossing (HRGC) incidents continue to represent a significant safety concern for the transportation industry. Drivers commit judgment errors and are susceptible to distraction. Recently, connected vehicle (CV) technologies have matured and represent a potentially viable, widely applicable, and readily implementable approach to warning highway drivers of a predicted collision with an approaching train. The Rail Crossing Violation Warning (RCVW) system aspires to leverage CV technologies to realize safety improvements at highway-rail grade crossings.



The RCVW system provides drivers with information about potential conflicts at railroad grade crossings. Drivers can be warned about activated crossing warnings using displays and audio signals in the vehicle.

Example warnings:

**EXIT TRACKS - DANGEROUS POSITION**  
**STOP FOR AN APPROACHING TRAIN**



The U.S. Department of Transportation (DOT) is committed to the research and development of innovative technologies intended on making travel safer. Specifically, the connected vehicle (CV) initiative seeks to create applications and prototypes that rely on the exchange of safety-critical information from vehicle to vehicle (V2V) and between vehicle and infrastructure (V2I) using Dedicated Short-Range Communications (DSRC) radios. Beginning in 2015, the Federal Railroad Administration (FRA) and its subcontractors have been effective in producing a CV prototype called the Rail-Crossing Violation Warning (RCVW), which is designed to notify approaching drivers of an active rail crossing and warn them of a potential collision. This project demonstrates the capabilities of the RCVW system in a live demonstration.



**Rail Transportation Program**  
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