Evaluation of Intersection Conflict Warning Systems (ICWS)

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Abstract

Rural intersections account for 30% of crashes in rural areas and 6% of all fatal crashes. One unique and promising solution has been to use intersection conflict warning systems (ICWS) at the minor approach of stop-controlled intersections. Early studies indicate lower intersection approach speeds, reduced conflicts, improved compliance with traffic control, and improved gap selection.

Research Question/Hypothesis

How effective are Intersection Conflict Warning Systems through evaluation of driver behavior at mainline and stop-controlled approaches with and without the ICWS installed.

ICWS

- Minor road sign to alert of crossing traffic
- Major Road Monitors
- Real time Information
- LED Flashers to better gain driver attention

Methods

Through the use of overhead and front facing cameras we can observe car and driver behavior at controlled and non-controlled intersections. We also used wavetronix technology to gain vehicle speeds. This allows us to determine the effectiveness of the ICWS. The study will be conducted for 1 week in length at 1 month and 4 months after installation.

Background

Before and after crash analyses have indicated reductions in total crashes up to 46% and severe crashes up to 72% with ICWS. However, there has been some evidence of increased roll-throughs, and some sites have experienced minor crash increases.

ICWS

- Live View camera trailers
- Stop sign mounted cameras
- Wavetronix radar vehicle and speed detection
- Remote video access

References


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