

Integrating Driver and Traffic Simulation to Assess In-Vehicle and Road-Based Level Crossing Safety Interventions (R2.111)

Background

Level crossing crashes result in enormous human and financial cost to society. This is important as level crossings are the single greatest source of risk to safety on the rail network. Most analyses have demonstrated that errors or violations on the part of the road user are the largest contributor to level crossing crashes indicating the urgent need for innovative road-based interventions to complement railway interventions. This proposal has been developed in conjunction with a number of main road organisations highlighting that concern about rail level crossing safety is not confined to rail industry, but is also shared by the road safety community.

Objective

The Australasian Railway Association has estimated that the industry-wide benefit of deploying Intelligent Transport Systems (ITS) interventions could reduce collisions by 10%. This project aims to improve level crossing safety by examining the road vehicle drivers' responses to new ITS interventions to advance both in-vehicle and roadside warning and protection systems.

Outcomes

The outcomes of this project will be a scientific assessment of the impacts of ITS based interventions on driver behaviour and findings for consideration by industry.

Benefits

It is envisaged that the identification of low-cost ITS technologies for level crossing protection systems will facilitate measures to reduce the occurrence and severity of crashes which would, in turn, reduce their associated cost and negative impacts on the economy in terms of value of loss of life, lost productivity and delays.

Project timeframe

1 January 2010 to 31 December 2012