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Intelligent transport systems — Vehicle-to-vehicle intersection collision warning systems (VVICW) — Performance requirements and test procedures

Systèmes de transport intelligents — Systèmes d'alerte de collision aux intersections de véhicule-à-véhicule (VVICW) — Exigences de performance et procédures d'essai

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

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Introduction

Vehicle-to-vehicle intersection collision warning systems (VVICW) warn the driver to avoid potential collisions at intersections. The VVICW warns the driver of imminent crashes with other vehicles crossing at a road junction. The system relies on relative positioning, speed and heading between vehicles determined using vehicle-to-vehicle (V2V) communication, such as dedicated short-range communication (DSRC). It is intended to be used to avoid intersection crossing crashes, the most severe crashes based on fatality counts. Due to limited field of view sensing, on-board sensor systems such as camera, lidar and radar systems cannot be used efficiently for such systems. Figure 1 illustrates the functional elements of VVICW.

The VVICW is a road level system that deals with conflict scenarios between vehicles driving on two connected road segments sharing a common intersection. VVICW positioning requirements are not demanding compared to those of red light violation warning systems, for example. A comprehensive set of intersection collision scenarios can be found in Reference [1].

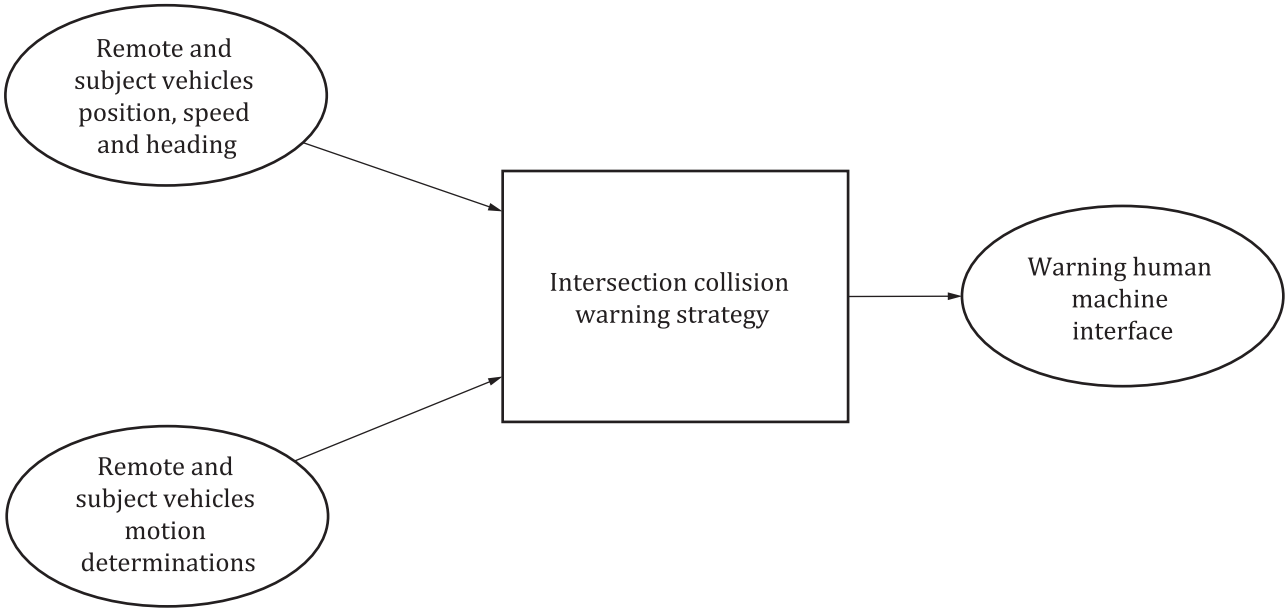

Figure 1 — Vehicle-to-vehicle intersection collision warning systems functional elements