Improved trustworthiness and weather-independence of conditional automated vehicles in mixed traffic scenarios

Résultats

Informations projet

TrustVehicle

N° de convention de subvention: 723324

Site Web du projet

DOI
10.3030/723324

Projet clôturé

Date de signature de la CE
24 Mai 2017

Date de début
1 Juin 2017

Date de fin
31 Octobre 2020

Financé au titre de
SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

Coût total
€ 4 998 903,75

Contribution de l'UE
€ 4 998 903,75

Coordonné par
VIRTUAL VEHICLE RESEARCH GMBH
Austria

Ce projet apparaît dans...

CORDIS fournit des liens vers les livrables publics et les publications des projets HORIZON.

Les liens vers les livrables et les publications des projets du 7e PC, ainsi que les liens vers certains types de résultats spécifiques tels que les jeux de données et les logiciels, sont récupérés dynamiquement sur OpenAIRE.

Livrables

Demonstrators, pilots, prototypes (1)

Demonstration of autonomous driving technologies and real-life safety features

Demonstration will be done with participation of project partners in proving ground and real life urban environment.

Documents, reports (14)

Project Cluster Management Guideline

Document to set the rules for external liaison.

Dissemination Plan

It provides the strategic dissemination activities foreseen by the consortium.

Specification of traffic scenarios and questionnaires

Specification report of traffic scenarios for the field test on the driving simulator including questionnaires.

Exploitation Report

Report detailing the results of the exploitation activity carried out by the partners mainly OEMs (VCC, FO, LIN, TF) and suppliers (IFAT, Valeo).

Intermediate Exploitation Report

Intermediate report detailing the results of the exploitation activity carried out by the partners mainly OEMs (VCC, FO, LIN, TF) and suppliers (IFAT, Valeo).

Traffic road injuries

Report on the analysis of traffic road injuries considering the age, gender, drowsiness etc.

Final Communication & Dissemination Report

This deliverable gives details about dissemination activities carried out by partners during year 3

Intermediate Communication & Dissemination Report

This deliverable gives details about dissemination activities conducted by TrustVehicle partners.

Modular co-simulation architecture plan

This report contains a connection matrix and detailed interface description with signal/timing specifications as well as specifications of tool solver-settings

Validation and evaluation of HMI concept

The report provides an overview of the system validation and feasibility to different vehicle types. Evaluation of the final HMI implementation is given and its potential impact to the traffic safety is assessed when penetration of the autonomous vehicles increases.

Final co-simulation setup

Together with the co-simulation software and hardware, this deliverable will include a manual with a set of instructions for non-specialist users.

Requirements for the co-simulation framework

This includes specifications on agreed/used domain simulation tools, agreed/used models and intended input and output signals. Additionally the agreed collected test-cases for validation are summarized.

Driver behaviour metrics

Report describing the driver behaviour metrics.

Traffic scenarios for final validation

Description of the traffic scenarios for final validation

Websites, patent fillings, videos etc. (1)

TrustVehicle Website & Community Communication Channels

Sites for continuous communication and dissemination. Community communication channels allow public discussions and exchanges of preliminary ideas, and newsletter. The website should include both public information and data only for the project consortium. It will also allow to announce results and releases in summarized form.

Publications

Thesis and dissertations (9)

Autonomous Trucks and Identification of Key Performance Indicators
Auteurs: Conor Deamer
Publié dans: 2017
Éditeur: University of Surrey

Automatic Parking of an Articulated Vehicle using Fuzzy Logic
Auteurs: Ramon Jose Ward Santiago
Publié dans: 2019
Éditeur: University of Surrey

Simulation and Analysis of a Multi-axle Articulated Autonomous Vehicle
Auteurs: Isaac Hoten
Publié dans: 2020
Éditeur: University of Surrey

Intelligent Trajectory Controller Development and Implementation for a Light Commercial Vehicle
Auteurs: Mohamed Youssef
Publié dans: 2019
Éditeur: University of Surrey

Tracking Controllers for Rigid and Articulated Autonomous Vehicles
Auteurs: Elle Ordona
Publié dans: 2021

Éditeur: University of Surrey

Articulated Autonomous Truck and Trailer Modelling
Auteurs: Rashaad Rizvi Hussain
Publié dans: 2019
Éditeur: University of Surrey

Development and Implementation of a Trajectory Planning Algorithm for an Autonomous Articulated Vehicle in Urban Scenarios
Auteurs: Jay Cooper
Publié dans: 2019
Éditeur: University of Surrey

Modelling and Simulation of a Multi-Axle Articulated Autonomous Vehicle Using Different Approaches
Auteurs: Peyman Moien Rad
Publié dans: 2019
Éditeur: University of Surrey

Development of an MPC-Based Trajectory Controller for Autonomous Truck and Truck-Trailer
Auteurs: Sergio Da Silva
Publié dans: 2019
Éditeur: University of Surrey

Other (2)

Catalogue of Assessment Criteria for Level 3 Autonomous Vehicles
Auteurs: Ahu Ece Hartavi, Erkan Alkan, Abishek Shah Alias Sangani (Eds.)
Publié dans: 2020
Éditeur: University of Surrey

Catalogue of Critical Scenarios
Auteurs: Ahu Ece Hartavi,Abishek Shah Alias Sangani
Publié dans: 2020
Éditeur: University of Surrey

Peer reviewed articles (2)

Collision–Free Trajectory Planning for Autonomous Vehicles via Automatic Synthesis Approach in Multi–Agent Scenarios

Auteurs: T. Kabbani, B. Castillo–Toledo, S. Di Gennaro, and A.E. Hartavi
Publié dans: IEEE/ASME Transactions on Mechatronics journal, 2021, ISSN 1083-4435
Éditeur: Institute of Electrical and Electronics Engineers

Real-Time Trajectory Generation using Potential Fields for the Automated Parking of Articulated Heavy Goods Vehicles
Auteurs: J. Cooper, T. Kabbani, P. Sarhadi, E. Sozen, B. Ozan, A.E. Hartavi
Publié dans: IEEE Accesss, 2021, ISSN 2169-3536
Éditeur: Institute of Electrical and Electronics Engineers Inc.
DOI: 10.1109/access.2017

Conference proceedings (6)

Quantitative and Qualitative Evaluation Methods ofAutomotive Time of Flight Based Sensors
Auteurs: Caterina Nahler, Christian Steger,Norbert Druml
Publié dans: Euromicro DSD 2020 Conference, 2020
Éditeur: Euromicro DSD

Fully Automated Reverse-Parking System for a Level 3 Autonomous Heavy-Duty Vehicle
Auteurs: Ahu Ece Hartavi Karci, Tarek Kabbani, Ersun Sözen
Publié dans: ITS Europe Congress, 2020
Éditeur: Ertico

Evaluation of driving control authority transitions in level 3 and level 4 automated vehicles
Auteurs: Kübra Zehra Kasikci, Ahu Ece Hartavi, Aldo Sorniotti
Publié dans: Conference: Otekon 2018, 2018
Éditeur: Otekon Conference

Exploring the Usage of Time-of-Flight Cameras for Contact and Remote Photoplethysmography
Auteurs: Caterina Nahler, Bernhard Feldhofer, Matthias Ruether, Gerald Holweg, Norbert Druml
Publié dans: 2018 21st Euromicro Conference on Digital System Design (DSD), 2018, Page(s) 433-441, ISBN 978-1-5386-7377-5
Éditeur: IEEE
DOI: 10.1109/DSD.2018.00079

Geometrical path planning approach for narrow street passing maneuver and relevant parameters
Auteurs: Emrecan Hatipoğlua, Kemal Rodoplub, Mert Assoyc, Emir Kutluay
Publié dans: IMSMATEC – International Conference on Material Science, Mechanical and Automotive Engineerings and Technology, 2020
Éditeur: IMSMATEC

Automated driving and HMI design for city bus and truck with professional drivers
Auteurs: Kimmo Kauvo, Mikko Tarkiainen, Sami Sahimäki, Ersun Sözen
Publié dans: 13th ITS European Congress, 2019
Éditeur: ERTICO

Book chapters (2)

Validation and Verification procedure for automated driving functions using the ex-ample of the TrustVehicle project
Auteurs: Bernhard Hillbrand, Pamela Innerwinkler, Dr. Georg Stettinger, Johan Zaya, Philipp Clement, Lisa-Marie Schicker
Publié dans: Intelligent system solutions for Auto Mobility and beyond, 2021
Éditeur: Springer

TrustVehicle – Improved Trustworthiness and Weather-Independence of Conditionally Automated Vehicles in Mixed Traffic Scenarios
Auteurs: Pamela Innerwinkler, Ahu Ece Hartavi Karci, Mikko Tarkiainen, Micaela Troglia, Emrah Kinav, Berzah Ozan, Eren Aydemir, Cihangir Derse, Georg Stettinger, Daniel Watzenig, Sami Sahimäki, Norbert Druml, Caterina Nahler, Steffen Metzner, Sajin Gopi, Philipp Clement, Georg Macher, Johan Zaya, Riccardo Groppo, Samia Ahiad
Publié dans: Advanced Microsystems for Automotive Applications 2018 - Smart Systems for Clean, Safe and Shared Road Vehicles, 2019, Page(s) 75-89, ISBN 978-3-319-99761-2
Éditeur: Springer International Publishing
DOI: 10.1007/978-3-319-99762-9_7

Monographic books (1)

Enhanced Trustworthiness and End User Acceptance of Conditionally Automated Vehicles in the Transition Period
Auteurs: Daniel Watzenig, Lisa-Marie Schicker (Eds.)
Publié dans: 2020, ISBN 978-3-030-60861-3
Éditeur: Springer

Droits de propriété intellectuelle

Patent (2)

Method and process for co-simulation with virtual testing of real environments with pedestrian interaction

Numéro de demande/publication: 20 1709348
Date: 2017-06-13
Demandeur(s): VIRTUAL VEHICLE RESEARCH GMBH

Improved pedestrian prediction by using enhanced map data in automated vehicles

Numéro de demande/publication: 20 1706922
Date: 2017-05-02
Demandeur(s): VIRTUAL VEHICLE RESEARCH GMBH

Dernière mise à jour: 22 Août 2022

Permalink: https://cordis.europa.eu/project/id/723324/results/fr