Co-operative Systems in Support of Networked Automated Driving by 2030

**Funding:** European (7th RTD Framework Programme)

**Duration:** Nov 2013 - Oct 2016

**Status:** Complete with results

**Total project cost:** €4,589,044

**EU contribution:** €3,349,570

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**Background & policy context:**

AutoNet2030 shall develop and test a co-operative automated driving technology, based on a decentralised decision-making strategy which is enabled by mutual information sharing among nearby vehicles. The project is aiming for a 2020-2030 deployment time horizon, taking into account the expected preceding introduction of co-operative communication systems and sensor based lane-keeping/cruise-control technologies. By taking this approach, a strategy can be worked out for the gradual introduction of fully automated driving systems, which makes the best use of the widespread existence of co-operative systems in the near-term and makes the deployment of fully automated driving systems beneficial for all drivers already from its initial stages.

The inter-vehicle co-operation is meant not only among automated vehicles, but extends also to manually driven vehicles. Drivers shall receive maneuvering instructions on their HMI; the ergonomy and non-distraction of this new user interface shall be validated. This system shall be optimised to make safe, predictable, and efficient maneuvering decisions.

**Objectives:**

AutoNet2030 aims to research and validate procedures and algorithms for interaction control among co-operative vehicles, including both automated and manually driven vehicles.

- Specifications of V2X messages for automated driving, also feeding ETSI ITS standardization
- Development of maneuvering control algorithms for cooperative vehicle automation
- Development of cost-effective on-board architecture for integrated sensing and communications
- Development of a new HMI facilitating the interaction between manually driven and automated vehicles

**Methodology:**

The AutoNet2030 project is broken down into six work packages, with a logical progression of use cases and requirements collection (WP2), system design work (WP3), implementation and integration (WP4), and validation work (WP5). The following figure illustrates this progression of project work, along with the main project-external inputs which will be taken into consideration.

**Parent Programmes:**

*FP7-ICT - Information and Communication Technologies*

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Other programmes:** The AutoNet2030 research project is co-funded by the EU within the FP7 framework programme. Grant agreement no: 610542
Partners:
- BROADBIT
- BASELABS
- CENTRO RICERCHE FIAT
- Armines ARMINES – MINES ParisTech – INRIA
- SCANIA
- HITACHI EUROPE
- ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE
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Key Results:

EXPECTED RESULTS
- Demonstration of inherently safe cooperative maneuvering control algorithms
- Standardized use of 5.9 GHz V2X communications at the service of automated driving
- A path for cost-optimized automated driving technology, making vehicle automation more widely deployable

Documents: d1_3_autonet2030_final_report.pdf

STRIA Roadmaps: Cooperative, connected and automated transport
Transport mode: Road transport
Transport sectors: Passenger transport
Transport policies: Safety/Security, Deployment planning/Financing/Market roll-out
Geo-spatial type: Other