PROJECT

OVERSEE

Open VEhiculaR SEcurE platform

Funding: European (7th RTD Framework Programme)

Duration: Jan 2010 - Dec 2012

Status: Complete

Total project cost: €3,907,955

EU contribution: €2,827,975

Call for proposal: FP7-ICT-2009-4

[CORDIS RCN : 93270](#)

Background & policy context:

As indicated in the final OVERSEE paper, modern vehicles are an integral part of the daily life in industrial nations. In 2005 more than 170 million cars were registered in the European Union. Besides the use of cars for individual transport of European citizen, commercial road vehicles are an inherent part of flexible logistic chains and an additional load to the European road network.

With respect to the amount of vehicles and the vehicle miles travelled per year there are two main goals for the use of vehicles and the operation of the European road network. For one thing the number of fatalities and injuries on the road has to be reduced in order to provide safety; for another thing the use of vehicles should be as efficient as possible with regard to the emission of CO2, consumption of fossil fuels and the use of road infrastructure.

The next generation of intelligent vehicular information and communication technology (ICT) applications for advanced traffic management, active vehicle safety, or the green electric car strongly depends on the availability of an ICT infrastructure combining both dependability and security attributes. Thus, future intelligent vehicles (i) have to provide an appropriate wireless access point to their onboard IT systems and in-vehicle applications, (ii) need itself in turn appropriate access to external information and applications, and (iii) have to execute multiple independent applications with different level of criticality concurrently in a trusted manner.

Objectives:

To meet the challenges, OVERSEE will realize an open vehicular IT platform that provides a protected standardized in-vehicle runtime environment and onboard access and communication point. Therefore, the main objectives of the OVERSEE platform will be IT security and dependability that means enforcing a strong level of isolation between independent applications and ensuring that vehicle functionality and safety cannot be harmed by any OVERSEE application.

Methodology:

OVERSEE will first carry out a requirement analysis based on a security risk and dependability analysis. It will then specify the in-vehicle platform architecture based on the following key elements:

- Efficient resource virtualization that meets the stringent real-time and security requirements
- Trusted access to security services protected by a vehicular hardware security module
- Flexible trusted dynamic administration of application deployment
- Monitoring capabilities based on a trusted point of control and observations (PCO)

OVERSEE will also specify and develop the capabilities that are needed to validate future open platform implementations. This will involve assurance approach, validation tools, and run-time building blocks. Finally, OVERSEE will realize at least two novel ICT applications to proof the feasibility of the approach.

Parent Programmes:
[FP7-ICT - Information and Communication Technologies](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Escrypt Gmbh

Address:
WITTENER STRASSE 45
44789 BOCHUM
Germany

EU Contribution: €680,120

Partner Organisations:

Universitaet Siegen

Address:
Adolf Reichwein Strasse 2A
57076 Siegen
Germany

EU Contribution: €419,282

Opentech Edv Research Gmbh

Address:
Liechtensteinstraße
2130 Mistelbach
Austria

EU Contribution: €199,960

Frauenhofer Geselschaft Zur Foerderung Der Angewandten Forschung E.v.

Address:
Hansastrasse 27C
80686 MUNCHEN
Germany

Organisation Website:
http://www.fhg.de

EU Contribution: €450,212

Technische Universitat Berlin

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STRASSE DES 17 JUNI 135
10623 Berlin
Germany

Organisation Website:
http://www.tu-berlin.de

EU Contribution: €134,036

Trialog

Address:
25 Rue Du General Foy

75008 Paris
France

EU Contribution: €459,536

Universitat Politecnica De Valencia

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Camino De Vera S/n
46022 Valencia
Spain

Organisation Website:
http://www.upv.es

EU Contribution: €288,851

Volkswagen

Address:
Berliner Ring 2
1894 WOLFSBURG
Germany

Organisation Website:
http://www.volkswagen.de

EU Contribution: €195,978

Technologies:

Safety systems
In-vehicle technologies for navigation and
safety

Development phase: Research/Invention

Documents:
📄 Use Identification (Other project deliverable)

STRIA Roadmaps: Cooperative, connected and automated transport

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Societal/Economic issues

Geo-spatial type: Other