Cooperative Self-Organizing System for low Carbon Mobility at low Penetration Rates

Fact Sheet

Project Information

<table>
<thead>
<tr>
<th>COLOMBO</th>
<th>Funded under</th>
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<tbody>
<tr>
<td>Grant agreement ID: 318622</td>
<td>FP7-ICT</td>
</tr>
<tr>
<td>Status: Closed project</td>
<td>Overall budget € 2 908 491</td>
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<tr>
<td>Start date 1 November 2012</td>
<td>EU contribution € 2 131 000</td>
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<tr>
<td>End date 31 October 2015</td>
<td>Coordinated by</td>
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DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV Germany

Project description

Cooperative Systems for energy efficient and sustainable mobility

Traffic is time and energy consuming and produces negative effects on the environment. The first pillar of the Green Paper on Urban Mobility: Towards a new culture for urban mobility adopted by the EU commission in 2007, puts a strong emphasis on (1) reducing congestion and its impact in everyday life on urban environments, and (2) developing smarter urban transport systems, whose aim is to spread good practices towards more efficient urban transport. Traffic control systems should cope with the ever increasing demand by determining the situation on the road network and by controlling traffic flows. Emerging cooperative techniques like vehicle-to-infrastructure communication increase the...
knowledge about road traffic participants and open new channels for delivering information to these participants. However, most cooperative systems require large penetration rates in order to assure their functionality, making the first steps towards their deployment unattractive.

COLOMBO will overcome this hurdle by delivering a set of modern, self-organizing traffic management algorithms designed for being applicable even at low penetration rates, asserting their usability from the very first deployment days on. COLOMBO will focus on two traffic management topics: traffic surveillance and advanced traffic light control algorithms. Herein, cost-efficiency and the reduction of vehicular emissions will be the project's key objectives. Both results are assumed to be more than a pure technology step. Rather than that, they lay the foundations for new, cost-effective and comprehensive way to measure and handle traffic. Additional results will include prototypes for incident and emission monitoring at intersections, going far beyond current state of the art.

COLOMBO will achieve its tasks by bringing together experts and methods in swarm intelligence, optimization, communication, traffic light control, traffic simulation, and vehicular emissions modelling.

### Field of science

/ engineering and technology/environmental engineering/energy and fuels/renewable energy
/social sciences/social and economic geography/transport

### Programme(s)

### Topic(s)

### Call for proposal

FP7-ICT-2011-8

### Funding Scheme

CP - Collaborative project (generic)

### Coordinator

DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV

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<thead>
<tr>
<th>Address</th>
<th>Activity type</th>
<th>EU contribution</th>
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<tr>
<td>Linder Hoehe</td>
<td>Research Organisations</td>
<td>€ 590 137</td>
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<tr>
<td>51147 Koeln</td>
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</tbody>
</table>
Participants (5)

[Technische Universität Graz](#)

**EU contribution**
€ 319 250

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**Activity type**
Higher or Secondary Education Establishments

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**Administrative Contact**
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**EU contribution**
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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
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