Vehicle-to-Vehicle and Vehicle-to-Infrastructure linkages

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Outline

What can be improved?
Introduction to Cooperative Systems
Cooperative system applications (examples)
Cooperative systems activities in Europe
Deployment enablers
What can be improved?

London 1960

London 2000
What more can be improved?

About 60 cars were in a highway crash, killing one person and five others seriously injured in Austria yesterday…

Autoworld.worldpress.com

Austria – A1 2008-03-26
Cooperative systems elements (CVIS project vision)
Cooperative interurban applications
Cooperative urban applications
Flexible lane usage - incentive for early adopters?

Spare bus-lane capacity can be used without serious negative impact on public transport:
– With 175 additional vehicles per hour, public transport is delayed by only 3% (which equals 2 seconds)

Using the spare bus-lane capacity the network performance increases significantly:
– With 175 additional vehicles per hour on the bus-lane, average travel-time for private vehicles decreases with 53%

Cooperative technology is essential

* Data from Peek Traffic
Cooperative fleet & freight
Cooperative communications

Key communication channel: 802.11p
Cooperative Systems in Europe

**CVIS**
- Coordinator: ERTICO
- Total budget: € 41 Million
- EC contribution: € 22 Million
- Consortium: 60 partners - 12 countries

**SAFESPORT**
- Coordinator: Fiat Research Centre
- Total budget: € 38 Million
- EC contribution: € 20.5 Million
- Consortium: 51 partners - 12 countries

**coopers**
- Coordinator: AustriaTech
- Total budget: € 16.8 Million
- EC contribution: € 9.6 Million
- Consortium: 37 partners - 14 countries

### Core Technologies
- Safety Time
- Critical

### Safety Time-Critical

### Road-Operators View

**Major activities in FP6**
Cooperative Systems in Europe

Car-2-Car Communications Consortium

EC supported:
• SISTER
• SeVeCom
• COMeSafety

National activities:
• Network on Wheels, INVENT, ACTIV (Germany)
• CVHS (UK)
• IVSS (Sweden)
How will we make the best progress? A proposal

Political, Social and Economic Interests

European Projects

Harmonization

Group of Experts

Specifications

Combination Clarification

C2C-CC

Convening Stimulation Moderation Editing Dissemination

ETSII

CEN

IEEE

ITU

ISO

IETF
Deployment enablers

Openness and interoperability
Safe, secure and fault-tolerant design
Utility, usability and user acceptance
Costs, benefits and business models
Risks and liability
Cooperative systems as policy tool
Deployment road-maps
...Thank you for your attention