Inter-vehicle Communication: Quo Vadis?

Falko Dressler, University of Innsbruck, Austria (coordinator)

Mario Gerla, University of California, Los Angeles, USA

Onur Altintas, Toyota InfoTechnology Center, Japan

Hannes Hartenstein, Karlsruhe Institute of Technology, Germany

Marco Gruteser, Rutgers University, USA

Javier Gozalvez, University Miguel Hernandez, Spain

Jorge Pereira, European Commission (unfortunately not being able to join)
Objectives and Outline

- Cooperative Intelligent Transportation Systems
  - 10+ years of research on inter-vehicle communication
  - First standards: DSRC/WAVE (IEEE 802.11p/IEEE 1609/ETSI ITS G5/...)
  - Not to forget: ubiquitous 3G/4G network access

- Industry and governmental decision planning
  - Having 3G/4G and DSRC in the vehicles: Making it mandatory? Self-commitment?

- Open challenges?
  - Follow-up: September 2013
Objectives and Outline

- The next few minutes: professional statements by
  - Mario Gerla, University of California, Los Angeles, USA
  - Onur Altintas, Toyota InfoTechnology Center, Japan
  - Hannes Hartenstein, Karlsruhe Institute of Technology, Germany
  - Marco Gruteser, Rutgers University, USA
  - Javier Gozalvez, University Miguel Hernandez, Spain

- Followed by open forum discussions
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- Jumpstarting the discussion

Assuming mandated use of DSRC

- What will be day-0 application?
- IVC concepts: beaconing (assuming re-broadcasts and data aggregation in place), geocast?
- Congestion control, all solved?

If not, what will be the motivation for DSRC (or similar technologies)?

- Towards cooperative driving: public acceptance (automated vs. autonomous)?
- For which applications do we need cooperative techniques?

IVC challenges based on application domains

- Efficiency? Awareness? Safety?