

# Inter-vehicle Communication: Quo Vadis?

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**Jorge Pereira**, European Commission (unfortunately not being able to join)

- 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?
  - F. Dressler, F. Kargl, J. Ott, O. K. Tonguz and L. Wischhof, "**Research Challenges in Inter-Vehicular Communication - Lessons of the 2010 Dagstuhl Seminar**," *IEEE Communications Magazine*, vol. 49 (5), pp. 158-164, May 2011
  - Follow-up: September 2013

- 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



- 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?