

# When Will Vehicular Computing Become Pervasive?

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# Vehicular Computing: Myth and/or Reality?

- **Myth**: a **real** application domain for mobile ad-hoc networking
- **Reality**: still a remote **dream**
  
- What are the killer applications?
- What are the solutions?
- Who are the players?
- What are the challenges?
- What are the barriers?

# What are the Applications?

- **Safety**
- **Transportation**: route planning and congestion avoidance
- **Entertainment**
- Who takes the driving seat?

# What are the Solutions?

- Autonomous
  - Car-to-Infrastructure
  - Car-to-Car
  - Car-to-Internet
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- No single solution fits all application domains
  - Merit criteria: cost-effectiveness, robustness, security, deployment and maintenance cost

# What are the Players?

- **Auto-makers** – focus on safety
  - **Government** – focus on transportation issues
  - **Cellular providers & Google** – focus on location-aware services and advertising
  - **Academia** – what is left?
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- Does academic research really count?
  - Who sponsors whom?

# What are the Barriers?

- **Liability**
- **Competition among auto-makers**
  - business model not clear
- **Policy/Law makers: slow**
- **Current technology limitations: DSRC, GPS**
- **Limited funding**
- **Slow penetration of pervasive computing in general**

# Outrageous Perceptions about Vehicular Computing?

- **Too much research**: irrelevant, redundant and low quality
- **Too many conferences**: VTC, ITSS/ITSC, ITSS/IV, 2xVanet, V2VCom, ESCAR, PerTrans, Ubiroads, WiVEC, etc.
- **Little collaboration** between industry and academia
- **Three different regional approaches**: Asia, Europe and U.S.