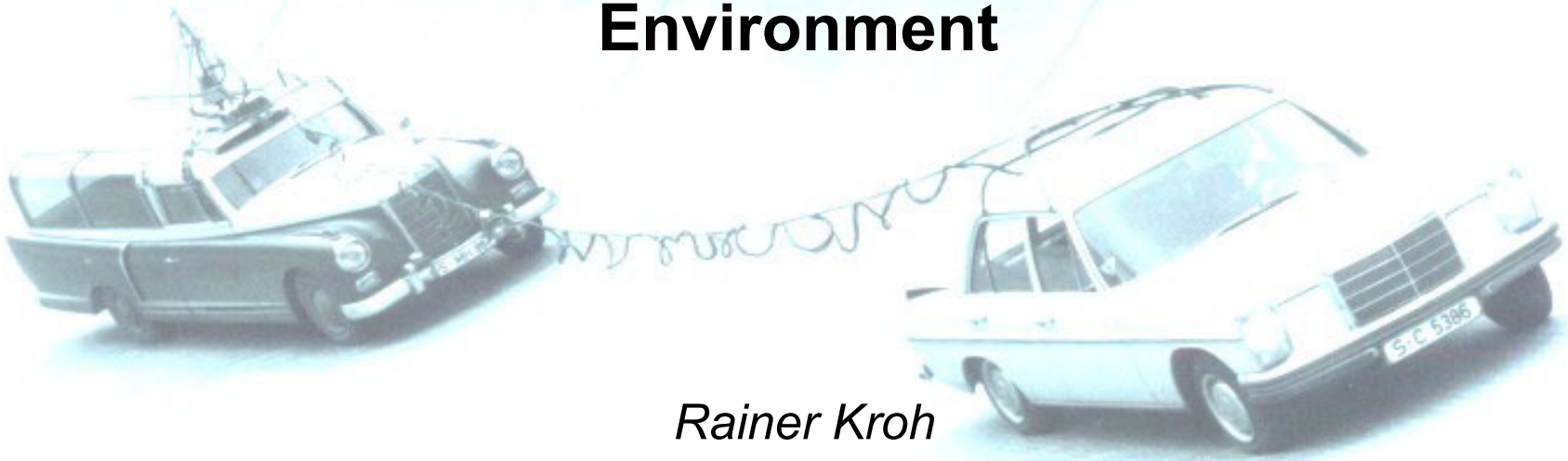
Summer School on Ubiquitous and Pervasive Computing

August 7-14, 2002, Schloss Dagstuhl, Germany

Ubiquitous Computing in a Vehicle Environment



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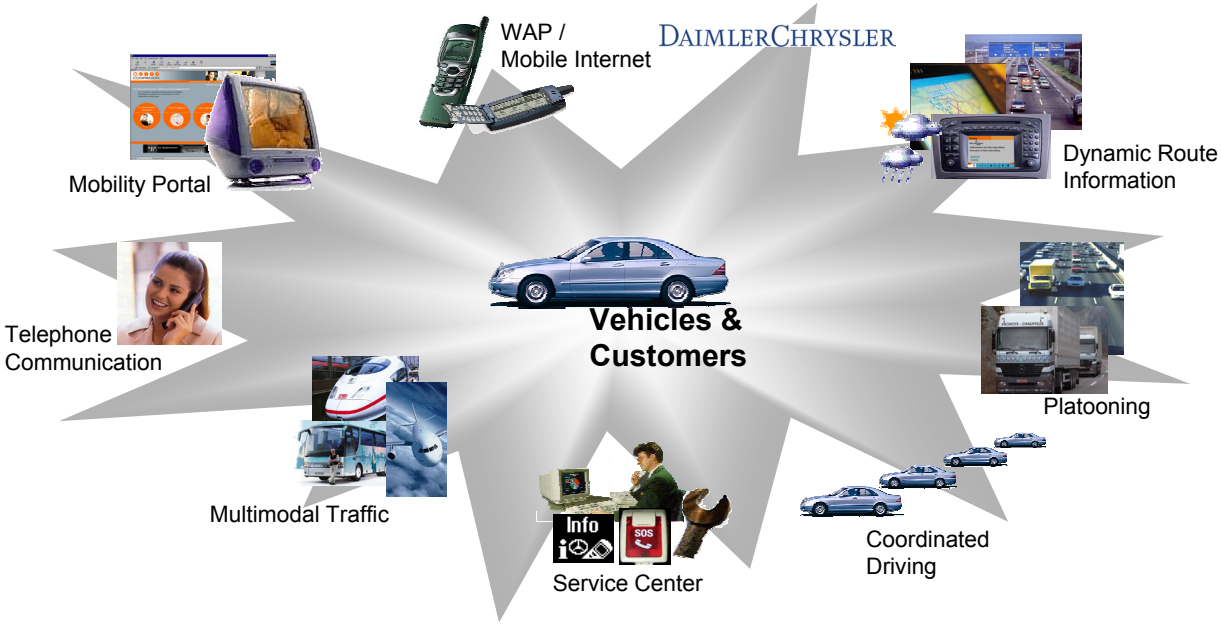
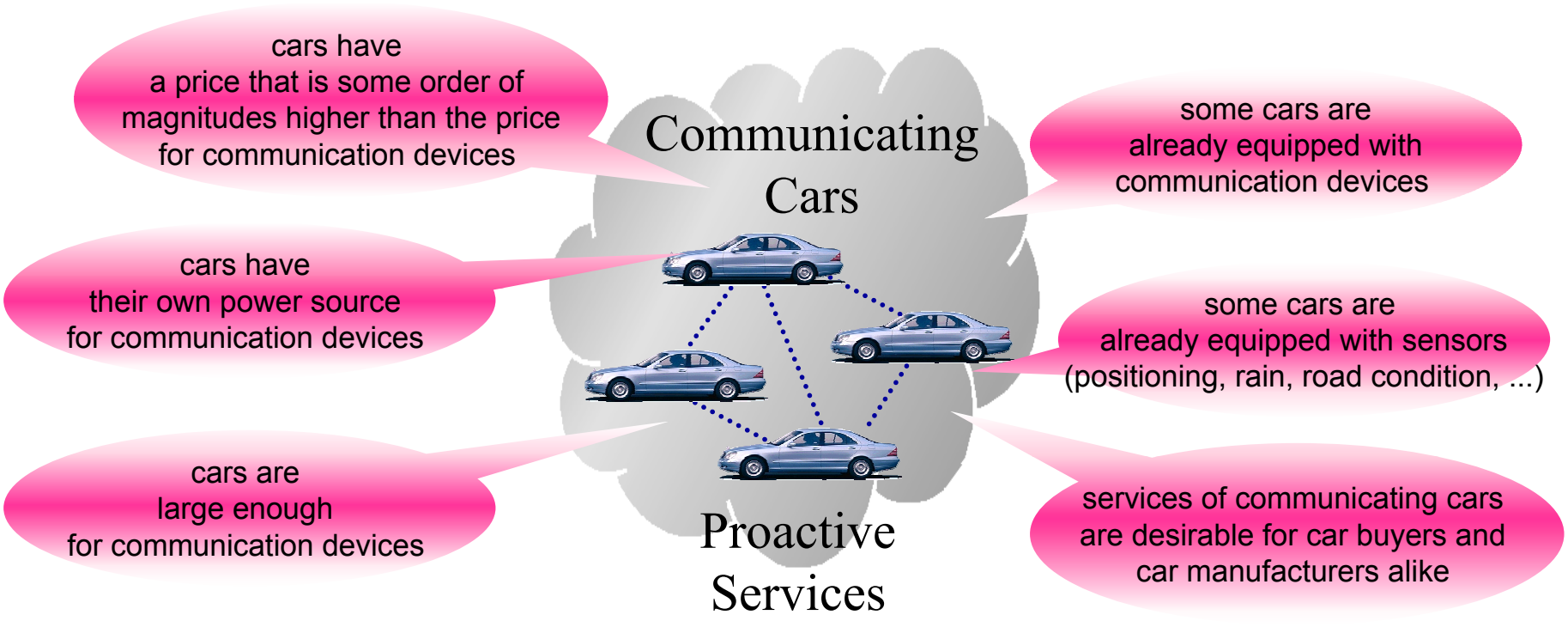
The Telematics Vision: Universal Connectivity

The universal connectivity of customers, vehicles, and their environment provides the foundation for a multitude of new services.



This changes product features, business processes, and value propositions throughout a number of industries, including the automotive industry.

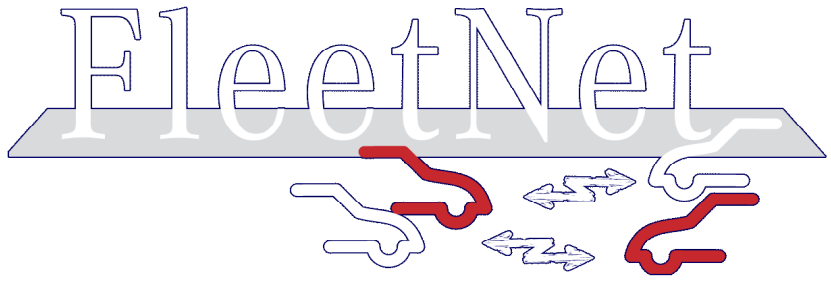
One Vision of DaimlerChrysler Telematics Research: Communicating Cars & Proactive Services



Vehicles are likely pioneers of ubiquitous computing

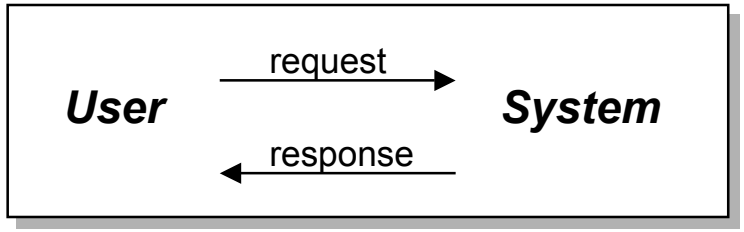
FleetNet - Internet on the Road

- partly funded by BMBF
- goals:
  - development and demonstration of a wireless ad hoc network for inter-vehicle communications
  - Internet integration
  - standard communication platform
  - demonstrators showing communication protocols and applications
  - standardization
- partners:
  - DaimlerChrysler AG, FhI Fokus, NEC Europe Ltd., Robert Bosch GmbH, Siemens AG, TEMIC Sprachverarbeitung GmbH, TU Hamburg-Harburg, Universities of Hannover, Mannheim and Karlsruhe
- further information: www.fleetnet.de

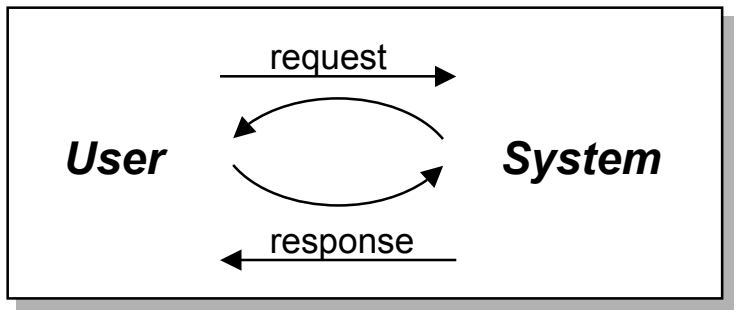


Proactive Computing

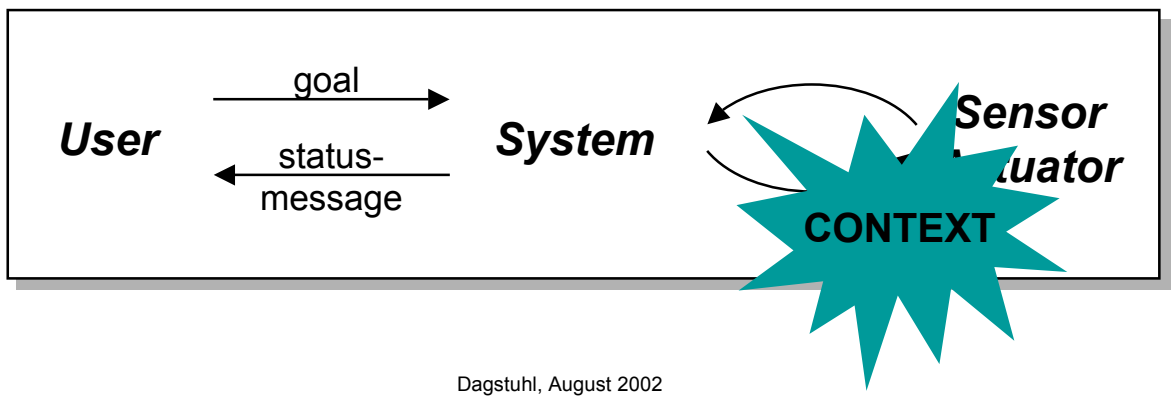
reactive



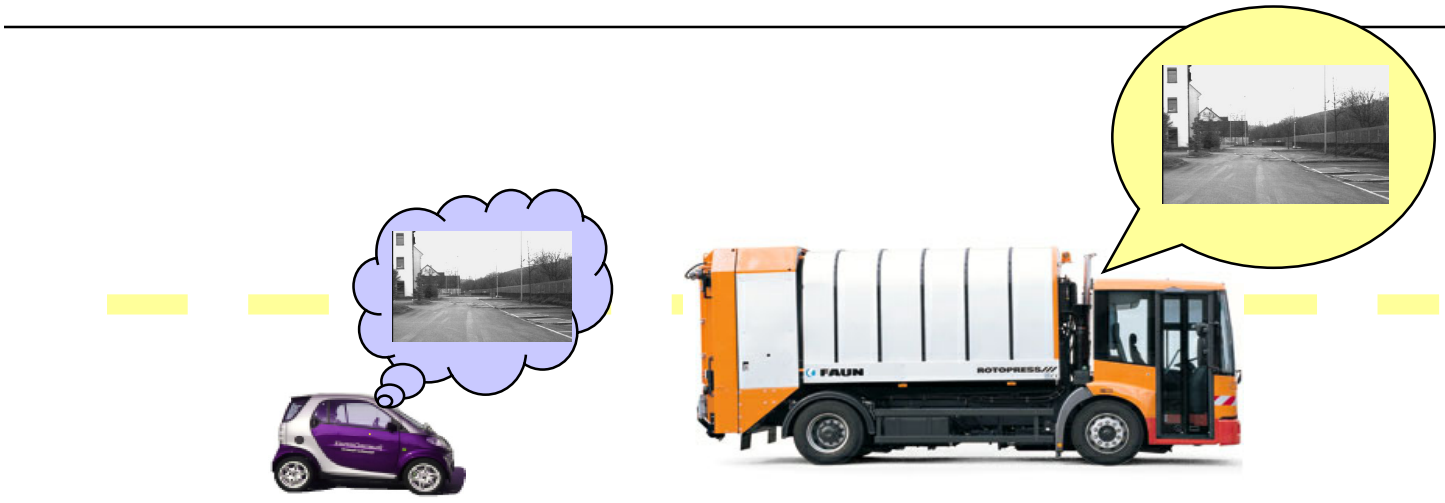
interactive



proactive



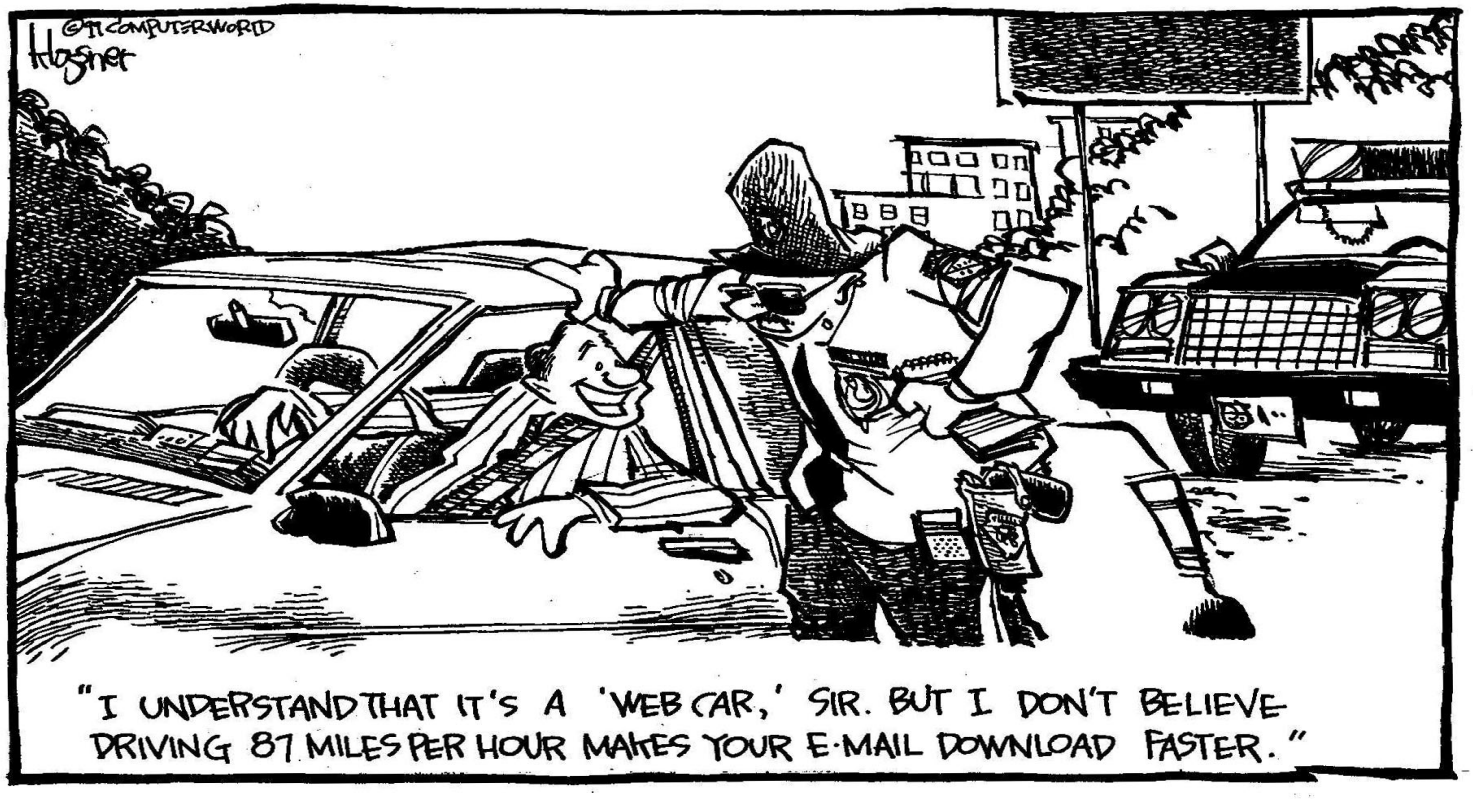
Example: Passing Assistant



Research Topics

• Context-Awareness	Provision of the required environment information
• Peer-Entity Discovery	Concepts to find and to identify the peer-entities
• Service Discovery	Evaluation and extension of methods to find and select (sub-)services
• Autonomy/Activity	Modeling and realization of an autonomous system behavior (pre-trip, on-trip)
• IT-Security and Privacy	Identity-Services (Authentication of Users, Vehicles and Software), Intrusion Detection, Incident Handling and Recovery, Transparency, Security Management
• Systems Architecture	Concepts for User- and Systemmanagement
• Mobile Communication	Communication between vehicles and the infrastructure
• User-Interface	Evaluation and integration of current MMI and Speech approaches
• Applications	Prototypical realization of vehicle applications

Thank you for your attention!



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