On-demand transportation system for sustainable mobility in urban areas

RITS Team
Team objectives and local collaborations

Overall objectives

Use of ICST and Robotics techniques to design and develop advanced driver assistance systems and new concepts of urban mobility based on highly automated vehicles.

Objectives related with “Smart City & Mobility Innovations”:
Developments of new concepts of urban mobility, including:
- On-demand transportation systems using automated electric buses
- New-concepts of automated redistribution of car-sharing vehicles and parking Valet
- Combination of traffic modelling, cooperative and automated driving and multimodal transportation

Our collaborations with the U.S.:
- PATH program (Berkeley): Steve Shladover, Wei-bin Zhang
- Volpe, The National Transportation Systems Center (US DOT): Jane Lappin
- US DOT: Kevin Dopart
- FHWA: Carl Anderson
- SwRI, Intelligent Vehicles System: Ryan Lamm
Advantages of our approaches:

- Multi-disciplinary technology deployments
- Mobility improvements:
  - Travel times reduction
  - Encouraging multimodality and resources
- Gas emissions reduction
- Space occupation optimization
Our solution

1. Design of new platforms, demonstrators
2. Design of on-board intelligence for advanced navigation and new redistribution modalities for car-sharing systems

Focus on dual mode vehicles

Focus on public transportation

3. Our “competitors”?
Application domains

Transportation

- Real demonstrations and deployments in European cities
- Especially in the framework of CityMobil-1&2 projects

Involved: Robosoft (start-up of Inria-RITS), EasyMile

Envisaged “new” markets:

- New automatic redistribution system...
  - car-sharing,
  - rental cars,
  - automated Taxis
- ... but also:
  - Parking VALET systems
Next steps

Our vision for the future:

Cooperative driving
Connected vehicles network

Expected collaborations with industry:

- Joint R&D: bilateral cooperation, PhD’s, research visits and exchanges...
- Technology transfer
- Joint demonstrators
Thank you

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