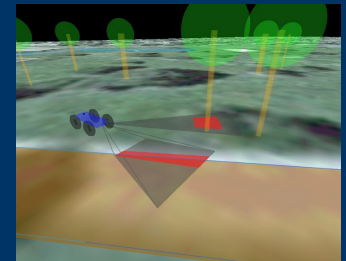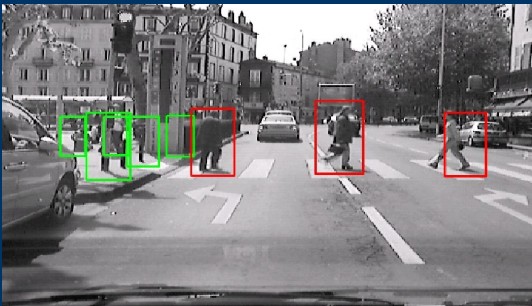# GDR Robotique
GT2 Workgroup
« Terrestrial Vehicles »

R. Chapuis / F. Peyret / D. Aubert / P. Rives

nov 2010

Summary

I- GT2 Work Group presentation
II- 2009-2010 activities
III- Future works

I- GT2 Work Group presentation

Main purposes of the GT2 TV

- Develop relationships between activities linked to ground vehicles

- Research meetings concerning different topics involving both researchers / students / engineers,

- Information sharing (national / european projects, ...)

GT Organization

Four topics

- **Localization and mapping**

- **Scenes understanding**

- **Vehicle control**

- **Communicating vehicles**

Main topics

1- Localization and mapping

- Data fusion

- Absolute localization

- SLAM

- Mapping and GIS

- ...

Main topics

2- Scenes understanding

- Obstacles detection and recognition

- Scenes understanding

- Image enhancement

- ADAS (Advanced Driver Assistance Systems) development

- ...

Main topics

3- Vehicle control

- Lateral and longitudinal optimal control

- High speed control

- Trajectory planing

- Dynamic parameters observation

- Obstacles avoidance and reactive navigation

- ...

Quatre volets thématiques

4- Communicating vehicules

- Uncentralized localization

- Uncentralized scenes understanding,

- Fleet control / platooning

- ...

II- 2009-2010 activities

2009 journeys

- 3 days workshop during 2009

- 20 to 40 people

- topics : local / global localization, visibility,

-

Trends in Signal Processing and fusion for localization
3 june 2010 - Paris

- Common ISIS GDR / Robotics GDR-VT organization

- 10 talks

  - SLAM

  - GNSS fusion

  - mapping

- 62 attendees

Symposium « Robotics 2010»
September 3-4
Montoldre (03)

2 days workshop

- Sept 3: demonstrations, video, round tables

- Sept 4 : workshop : 16 presentations

III- Future works & call for participation

24 January 2011
Workshop « Multirobot and human-robot systems : cooperation, control and the human operators'roles »

- GT2, GT4, GT5, « club des partenaires » common organization

- Toulouse

- vehicles cooperation (terrestrial / drones …)

- complementarities analysis of the GT2

February 2011

- Workshop «SLAM for outdoor localization"
  - Visual SLAM
  - SLAM MOT
  - Other SLAM sensors (lidar / Radar)
  - High level cues and detectors
- Date to be fixed soon !
- **Contributions welcome !!!**

June 2011

- Workshop « communication » : with GDR ASR (Architecture, systems, netwoks)

  – Cooperative perception

  – Uncentralized fleets localization

  – Multi-vehicles control

- **Contributions welcome !!!**

July 2011 ?

- Workshop « Navigation and control »
- **Contributions welcome !!!**