Eco driving

Development of a model-based « eco-driving » application
With on-line optimization

• To assess or qualify the recorded driving behavior
• To give some recommendations for fuel consumption reduction in the same duration trip

Online assessment
Eco-driving learning

Based on the vehicle speed profile
• Observation of the vehicle speed (GPS Speed, accelerometer, gyroscope, magnetometer)
• Identification of the breakpoints where the vehicle is submitted to external conditions (traffic, pedestrian, signs)

Computation of the optimal speed
Optimization of the vehicle velocity profile to minimize the energy consumption under time and distance constraints

Computation of the energy consumption
- Online vehicle model adapted with few characteristics
- Validation on a vehicle consumption database

Online analysis to rate the driving behavior

1. Driving analysis
2. Final trip summary
3. Track records of the different trips
4. Fine analysis to understand the details of each trip