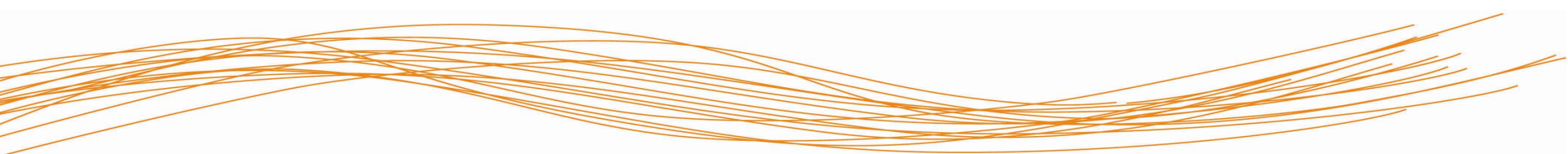




Workshop "Security of Mass Transportation", Berlin, 18th March 2009

Urban transport research in the European Union



Patrick Mercier-Handisyde
Transport Directorate
European Commission
DG Research





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1. Challenges for Urban Mobility

- 80 % of the EU-27 population lives in cities
- Challenges faced by cities:
 - Congestion: costing 1% of GDP annually
 - Health issues: local air pollution and noise
 - Safety and security: 2/3 of road accidents, 1/3 of road fatalities in urban areas, security in public spaces
 - Climate change: 40% of CO2 emissions of road transport in urban areas
 - Energy consumption: domination of oil as a transport fuel
- Public authorities and cities are at key in achieving **sustainable urban transport systems**





Main Policy Drivers

- **EU Research policy** : realization of the European Research Area in the different transport sectors (**Green Paper 'The European Research Area: New Perspectives'**)
- **EU Transport policy** (2001 White Paper, Mid term review) and the **Green Paper on Urban Mobility**
- **EU Environmental policy**
- **EU Cohesion policy**



Research Framework Programs

- EU main instrument to implement research in Europe
- The 7th Framework Program (FP7) will run from 2007 to 2013
- FP7 budget: € 50.5 billion
 - 41% increase from FP6 at 2004 prices
 - 63% increase at current prices
- FP7 was designed to:
 - Keep EU as a world leader in the selected priority areas
 - Respond to Europe's employment needs and competitiveness
- Dedicated **Theme on « Transport »**
(Transport Research web site:
http://ec.europa.eu/research/transport/index_en.html)



Green Paper on Urban Mobility

- Basis for a European Policy on urban transport, as part of the Transport policy.
- The Green Paper identifies the problems/challenges , new actions, responsibilities. It proposes actions through which EU can add value, respecting subsidiarity principles
- Published the 25th September 2007
- Green Paper web site:
http://ec.europa.eu/transport/clean/green_paper_urban_transport/index_en.htm
- Next steps: Publication of a concrete **Action Plan**



2. EU Research for Sustainable Urban Mobility: a strong foundation to build upon

- **From the 4th to 5th Framework Programmes (1994-2002):** Increased collaboration, development of critical technologies and problem solving approaches
- **6th Framework Programme (2002-2006):** Building ERA, strengthening structuring and coordinating EU R&D, concentration on EU challenges, EU competitiveness:
 - For research on technology development (e.g. MODURBAN, CITY-MOBIL,...)
 - To support transport policy (CIVITAS I+II)
- Stimulating the creation of industrial led “**European Technology Platforms**”, inc. **ERTRAC** for road transport and **ERRAC** for rail and Coordination Action on Urban Transport **EURFORUM**



3. Transport Research in FP7

THEME 7: TRANSPORT

Sub-theme 7.1 Aeronautics and air transport

Sub-theme 7.2 Sustainable Surface Transport

Sub-theme 7.3 Galileo
(support to the European global satellite navigation system)



Towards Integrated EU Surface Transport Systems

- Five **ACTIVITIES** in line with strategic and policy challenges
 - **Greening** of surface transport
 - Encouraging **co-modality** and **decongesting** transport corridors
 - Ensuring sustainable **urban mobility**
 - Improving **safety and security**
 - Strengthening **competitiveness**
- Integrating transport modes
- Embracing policy requirements, regulation and social change



ACTIVITY 3: Urban mobility

● AREA 2 High Quality Public Transport

Expected impact



- Increased modal share of public transport
- More attractive and inclusive urban transport
- Improved overall performance of public transport
- Promotion of co-modality



EBSF : European Bus System of the Future

→ Objective: Increase the quality of public passenger transport while improving accessibility and intermodal integration

→ Coverage:

- ◆ *Design of a new generation bus system*
- ◆ *Maximisation of energy conversion*
- ◆ *Methods and systems for more efficient operations*
- ◆ *Efficient ground-vehicle passengers transfers*



→ Special emphasis:

- ◆ *Components and sub-systems modularity including open architectures and interfaces*
- ◆ *Accessibility to all*



ACTIVITY 4: Safety & Security

● AREA 1 Integrated Safety and Security

Expected impact



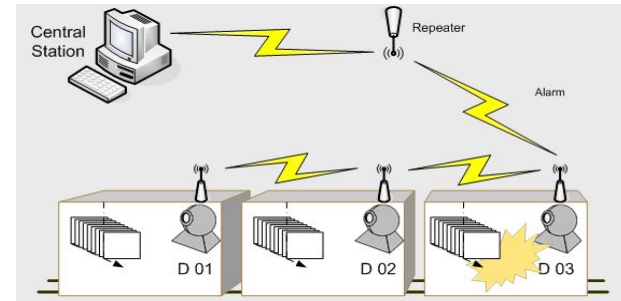
- Increase the level of safety and security of the transport system and its components in order to reduce the number of fatalities and the level of injuries caused by transport accidents
- Decrease the level of human error and increase the safety performance of the infrastructure through positive interactions between pilot/infrastructure/vehicle
- Maintain the level of safety and security in transport, whilst contributing to mitigation of GH effect and reduction of CO₂ emission
- At least neutral impact to climate change





ASPIS: Autonomous Surveillance in Public Transport Infrastructure & Systems

- aims at the development of a prototype surveillance system based on autonomous, smart monitoring devices that capture data only upon the occurrence of an incident for unattended surveillance in public transport.
- when triggered, the devices propagate the triggering to their neighbouring devices and send alarm; they upload the captured data to the central station and provide an overview of the incident, offer a dedicated bi-directional communication channel and serve at least as black box.
- the system is for unattended surveillance in public transport (vehicles and stations) and serves for prompt and reliable situation awareness during early, critical emergency phases. The system will be tested and validated in underground transport (station and vehicle) and at a Ro-Ro Ferry.





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Thank you for your attention

