



Safety in Operating Motorways

Jacques BOUSSUGE



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- Why the motorway infrastructures are safer
- Action on the infrastructures and Intelligent Transport Systems (ITS)
- Action towards the drivers



A continuous management of risk's prevention through 4 missions:



Understanding all types of accident



Raising driver awareness



Making the motorway an even safer place



Working with others involved in safety



Safety report in the last decade Network of ASECAP members

Austria	2002-2008	-47%
France	2002-2008	-49%
Italy	2002-2008	-48%
Portugal	2004-2009	-21%
Spain	2000-2009	-62%

In the target of the European objective: -50% 2000>2010 Motorway 5 time safer compared to other network(Fr)



Safety factors on motorway



rectilinear



Central reserve



interchanges



Restricted users



monitoring



Road side equipment

ITS



Motorway equipment : prevention of accident , reduction of severity



Action on the infrastructures and equipments according to concession contract

- maintenance services and procedures to preserve and maintain every motorway element in high-performance condition,
- renovating and resurfacing their roadways
- audits and "inspections" by "Owner" Entities and granting Bodies, in order to verify the respect of appropriate standards of service
- Road safety Infrastructure management Directive (2008/96/EC)



The challenge in the future

- To optimize the infrastructure
- To face an increase of Traffic (+ 30-50%)
- To face the objective of zero accident (number of fatalities /2 in next 15 years)
- To face the objective of zero congestion
- To face a target reduction of CO2 emission

Intelligent Transport Systems, a tool for this new challenge: draft ITS Directive



Priorities and action of the motorway companies to improve infrastructures and equipments

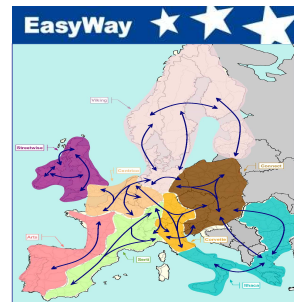
Supervising the network and acting

- Improve the equipment performance to detect event and act in real time
 - Automatic incident detection (less than 20")
 - Immediate alert to the emergency services
 - Real time traffic information to the driver through motorway radio & variable message signs



ITS Deployment at european level with Easyway – 3 phases in 2007-2013

- Nearly all member states:
 - Traveller information services
 - Freight and logistic services
 - Traffic management services
 - Supported by monitoring (including data exchange between TCC)
- + European guidelines



Cooperative traffic management

- An improvement of motorway operation to respond to the new challenge ?
- Generalisation of V2I and I2V communication in real time, and satellite positioning
- ▶ V2I: improve data collection (incident detection more precisely and more rapidly)
- ▶ I2V improve driver information (more precise more located)
- ▶ extend possibilities of traffic management



CVIS - SAFESPOT - COOPERS - ROSATTE -e-Call



Example of ITS application in EW: speed regulation A7 motorway

- Traffic regulation to optimize the traffic flow
 - Speed limitation regulation (110, 90, 70 Km/h)
 - Results
 - ➔ Very good acceptance by the drivers
 - ➔ Diminution of 25% up to 50% of accident number
 - ➔ Diminution of 20 % up 30% of congestion

500 tonnes of CO2 saved during summer 2009



Example of ITS application: in-car speed limit information

- Permanent speed limit
- Support to automatic enforcement
- Temporary speed limit (real time)
- Safety of users and workers in work zone
- Dynamic speed limit (real time)
- Support to speed regulation



Actions towards the drivers

Example: ASFA carries out an analysis of the factors causing fatal accidents – european safety charter



Fatigue and drowsiness	1 accident out of 3
Excessive Speed	1 accident out of 6
Alcohol, drugs, medicines	1 case out of 4
pedestrians	1 accident out of 9
Under-inflated tyres	1 case out of 20
Over accidents	1 accident out of 7
Not wearing a seat belt	1 deaths out of 3



Action towards the drivers

- In depth Study to better understand drowsiness and fatigue
 - (ASFA –Medical University of Bordeaux)
 - 5000 phone calls et 35000 internet
 - ➔ 28 % of drivers declare having faced drowsiness at the wheel
 - ➔ 4% of drivers had near-miss driving accident (enter the hard shoulder).

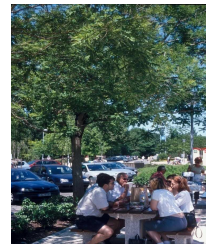
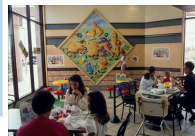
Safety campaign in 2009
In pursuit of their commitment to safety, the motorway companies are developing prevention campaigns



Action towards the drivers

Accompanying drivers throughout their trip

- Provide possibility to stop on a regular basis
 - ➔ service areas
 - ➔ rest areas



Thank you
for your attention



ASSOCIATION PROFESSIONNELLE
AUTOROUTES ET OUVRAGES ROUTIERS

3, rue Edmond Valentin – 75007 Paris
Téléphone : (+33) 1 49 55 33 00 – Télécopie : (+33) 1 49 55 33 91
Internet : www.autoroutes.fr – Courriel : asfa@autoroutes.fr