Safety in Operating Motorways

Jacques BOUSSUGE

Content

• Safety report
• 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

<table>
<thead>
<tr>
<th>Country</th>
<th>Period</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>2002-2008</td>
<td>-47%</td>
</tr>
<tr>
<td>France</td>
<td>2002-2008</td>
<td>-49%</td>
</tr>
<tr>
<td>Italy</td>
<td>2002-2008</td>
<td>-48%</td>
</tr>
<tr>
<td>Portugal</td>
<td>2004-2009</td>
<td>-21%</td>
</tr>
<tr>
<td>Spain</td>
<td>2000-2009</td>
<td>-62%</td>
</tr>
</tbody>
</table>

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

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,

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

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

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

<table>
<thead>
<tr>
<th>Fatigue and drowsiness</th>
<th>1 accident out of 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive Speed</td>
<td>1 accident out of 6</td>
</tr>
<tr>
<td>Alcohol, drugs, medicines</td>
<td>1 case out of 4</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>1 accident out of 9</td>
</tr>
<tr>
<td>Under-inflated tyres</td>
<td>1 case out of 20</td>
</tr>
<tr>
<td>Over accidents</td>
<td>1 accident out of 7</td>
</tr>
<tr>
<td>Not wearing a seat belt</td>
<td>1 death out of 3</td>
</tr>
</tbody>
</table>

Actions towards the drivers
In depth Study to better understand drowsiness and fatigue
- (ASFA – Medical University of Bordeaux)
- 5,000 phone calls et 35,000 internet
- 28% of drivers declare having faced drowsiness at the wheel
- 4% of drivers had near-miss driving accident (enter the hard shoulder)
- 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