eSafety Initiative and HMI

Alan Stevens
(Co-Chair HMI Working Group)

The eSafety Initiative

- **A joint industry - public sector initiative** Launched at the eSafety High-Level Meeting on 25 April 2002 and Under the leadership of the European Commission (DG INFSO)
- **Goal:** To accelerate the development, deployment and use of new technologies for increasing road safety in Europe
- **Plenary Sessions:** All stakeholders, chaired by the Commission (currently 150 members)
- **Working Groups:** Specific focus, chaired by industry (currently 9 Working Groups)

eSafety Working Groups

Steering Group	
Accident Causation Analysis	Research and Development
Emergency Call (eCall)	Road Maps
Human-Machine Interaction	International Co-operation
Real-Time Traffic and Travel Information	
Heavy Duty Vehicles	User Awareness

WG(HMI) Membership

Expert Group

- Daniel Augello, Renault (F)
- Anders Hallen, Volvo (Sw)
- Lutz Eckstein, D-C, BMW (Ge)
- Winfried Koenig, Bosch (Ge)
- Annie Pauzie,* Inrets (F)
- Christhard Gelau,* Bast (Ge)
- Alan Stevens,* TRL (UK)

* Co-Chairs

Ring Group

- Wider group informed with all papers and invited to comment but not attending meetings.

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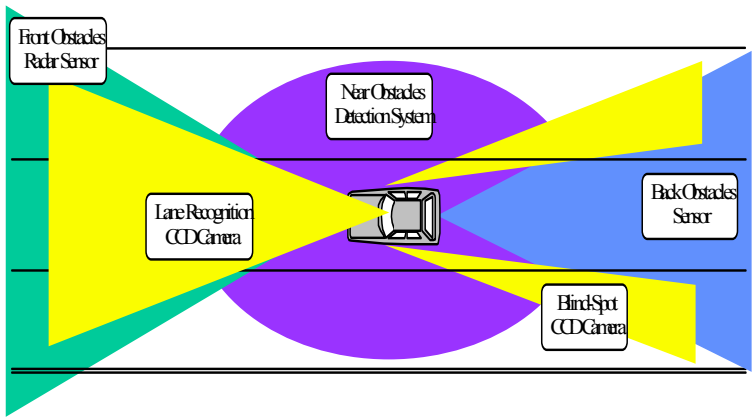
Scope

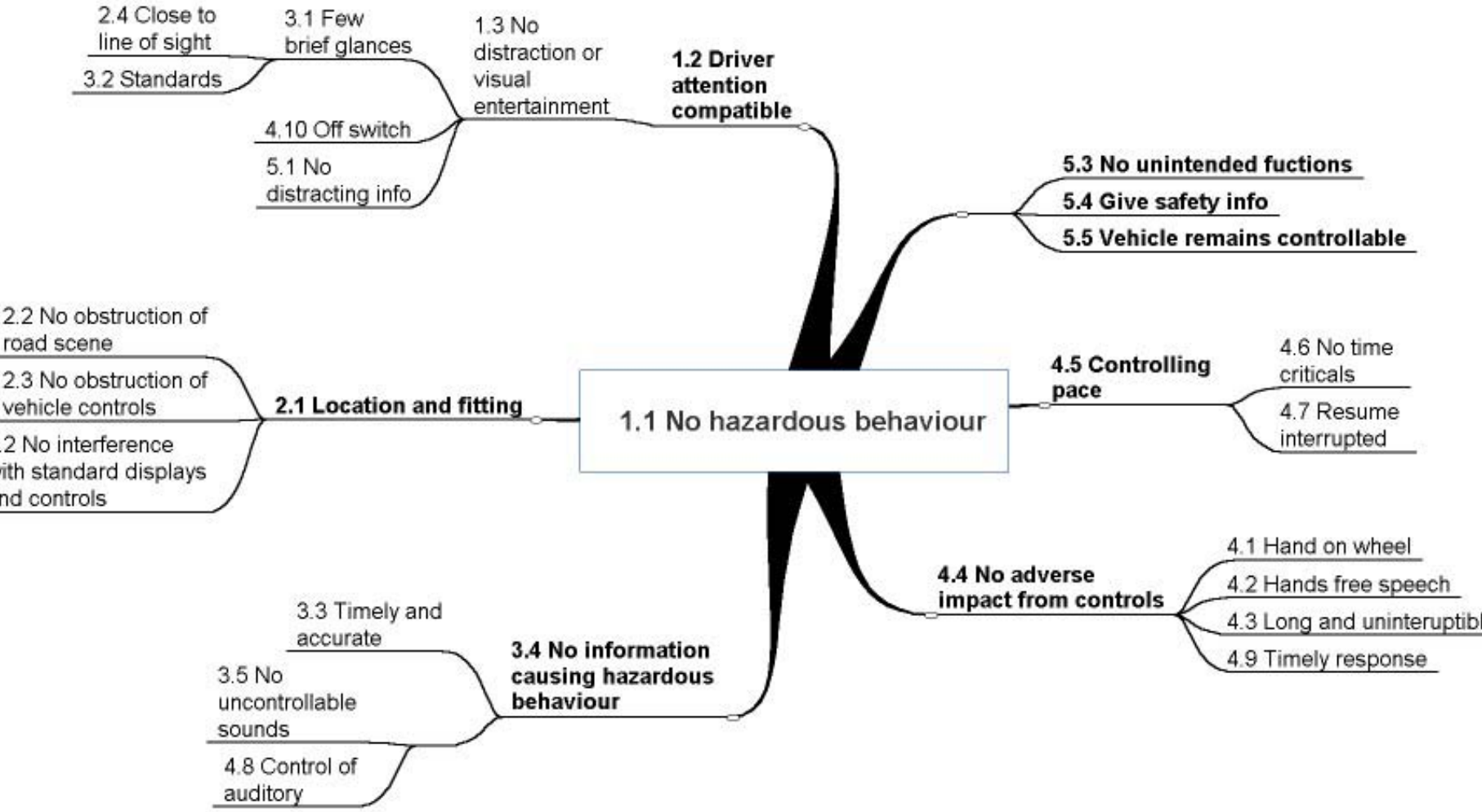
- **"M1" vehicles (passenger cars); Ring Group advising on other vehicle classes**
- **Focus on information systems but assistance systems not excluded**
- **Balanced risk / benefit approach; i.e.:**
  - *Absolute proof* of pre-deployment safety not practical
  - *Overall* improvement in safety expected, but nature will vary
  - *Anticipate* driver misuse of portable and installed systems



Human-Machine Interaction

- Identifying the HMI related problems in introducing in-vehicle *e*Safety systems
- A specific issue: Nomadic Devices
- Amendment and development of the existing European Statement of Principles (ESoP)
- Other recommendations as required

ESoP – Key HMI design issues



Nomadic Devices – Key Issues

- **Appropriate display and interaction**

- **Secure fixing**

Nomadic Devices – French Example

- Implementation of the same function by 3 Express Delivery Companies

TECHNOLOGY SPECIAL REPORT:

Internet Cars: Making Drive-Time Productive

By Paul Korzeniowski
TechNewsWorld

"By delivering a needed customer service, automobile manufacturers view telematics as a way to enhance brand loyalty," said Frank Viquez, research director for automotive research at market research firm ABI Research.

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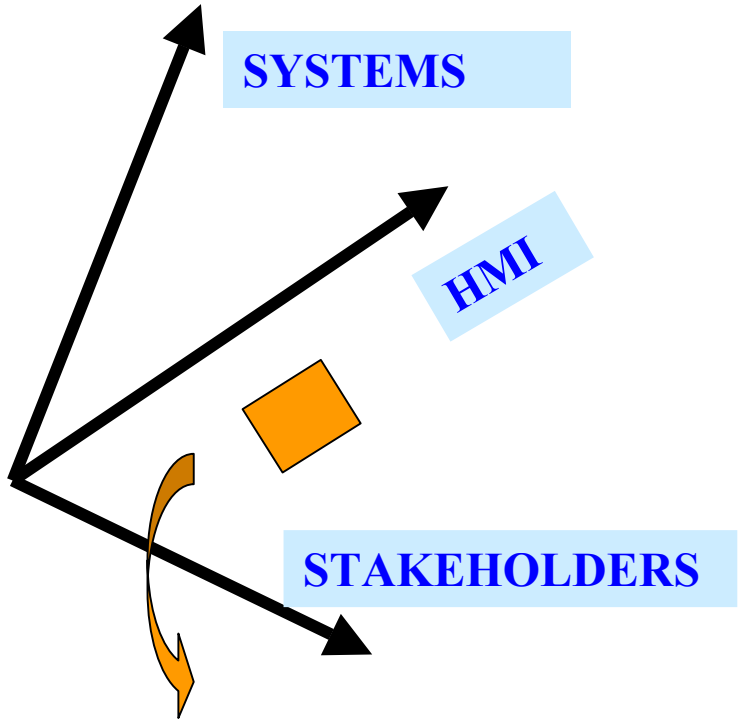
Analysis / Solutions Matrix

- **SYSTEMS**:
  - Nomadic
  - Aftermarket
  - OEM installed/ integrated
- **HMI**:
  - Installation
  - Info. Presentation
  - Interaction Modes
  - Use
- **STAKEHOLDERS**:
  - Vehicle Manufacturers
  - System Manufacturers
  - Service Providers
  - Fleet Owners and Employers
  - Drivers
  - Authorities



In each box:

- Who is Responsible?
- How can we promote safety

Solutions: Nomadic Devices

NOMADIC	Vehicle Manuf-acturer	System Manufacturer	Service Provider	Fleet Owners and Employers	Drivers	Authorities
Installation	Kit?	Supply Kit! Consumer information Comply with ECE21	\	**R** Correct installation	**R** Correct installation	Enforce secure fixing Information to drivers ESoP should link to ECE21
Information Presentation		**R** Apply ESoP Switch off functions not designed for use while driving e.g. no unlimited access to Internet	**R** Screen design suitable for use Apply ESoP Could attach suitable for driving "flag"	**R** Specification of custom systems Code of Practice for drivers	\	Identify/implement specific actions on enforcement Promote ESoP Research
Interaction	Supply "vehicle moving" signal	**R** Apply ESoP	\	**R** Specification of custom systems	\	As above
Use	Inform	Instructions for safe use	\	Code of Practice Training	**R** Learning	Define rules (e.g. mobile phone) Enforce

Concerning ESoP

- Explicitly address information presented by Service Providers (e.g. running text)
- Extend scope to include responsibilities of Fleet Managers/Employers
- Revise ESoP for clarity, maintaining existing structure and principles
- Identify links with standards, Regulations, Directives, etc.
- Add specific criteria only where validated and widely agreed
- Seek collaboration with US and Japanese initiatives on HMI guidelines
- ESoP should be widely disseminated and its impact monitored by Member States

ESoP already applies to Nomadic Devices

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Product-responsible Organisation

- **Organisation bringing a new or modified product to the market**
  - The term product also covers services
  - The product means that product used and experienced by the driver
  - The product-responsible organisation can be a system manufacturer or provider but also a software provider
  - The distribution of responsibility for various products needs to be clearly defined.
  - This responsibility includes compliance with all applicable regulations

Specific Recommendations - 1

These recommendation apply to functions intended for use while driving. Precise wording will be available on the eSafety web site

Product-responsible organisations should:

- Apply the ESoP and provide clear instructions for product use
- Supply fitting kit (complying with the intent of ECE Reg. 21) and ensure consumer information
- Ensure functions not intended to be accessible to the driver while the vehicle is in motion are disabled when the vehicle is moving
- Cooperate with the automotive industry in providing smart interfaces between NDs and the vehicles' integrated HMI (interfacing standards; filtering criteria for access and information depending on the driving context)

Specific Recommendations - 2

These recommendation apply to functions intended for use while driving. Precise wording will be available on the eSafety web site

Service providers should:

- Develop and comply with a “Safety Agreement”, compatible with ESoP, together with hardware platform providers, e.g. after-market, nomadic manufacturers, vehicle manufacturers

Member States should:

- Seek self-commitment of Nomadic providers to the ESoP
- Take measures (e.g. legislation) to ensure secure fixing of nomadic & aftermarket devices according to ECE R21, or equivalent
- Continue to actively enforce existing Health and Safety legislation concerning at-work driving practices
- Take measures to ensure that use of nomadic devices by the driver while driving is hands-free
- Identify and take necessary actions on the unintended use or misuse of visual entertainment systems (e.g. TV, video games)

- **Mail box:**
  - INFSO-eSafety@cec.eu.int
- **Web-site:**
  - http://europa.eu.int/information_society/programmes/esafety/index_en.htm
- **eScope (*e*Safety Observatory):** www.eScope.info