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Driver fatigue warning systems; legal issues and policy recommendations

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Introduction (I)

Objectives of the legal research activities in AWAKE

- To describe relevant legal frameworks and insurance practices
- To identify legal requirements and conditions for the successful deployment of driver hypo-vigilance systems
- To formulate recommendations to support the rapid deployment of driver vigilance monitoring systems

Introduction (II)

Approach

- Examine and describe relevant legal frameworks
- Explore and describe current insurance practices and policies.
- To gather additional information from experts and stakeholders (governments, approval authorities, insurance companies etc.) on perceived legal impediments, liability aspects and insurance issues through questionnaires, workshops and interviews.
- To formulate recommendations to facilitate and support the successful deployment of AWAKE-systems

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2. Guidelines, standardization and safety regulations (II)

- The drafting of design guidelines and test procedures (e.g. defining acceptable limitations) may support the rapid introduction because of
  - Government concerns regarding traffic and consumer safety
  - The need to demonstrate functionality/safety and to promote uniformity to make them successful in the marketplace
  - Minimize product liability risks
- Relevant activities
  - Deliverable 9.1
  - European research projects (RESPONSE)
  - Formal Standards Bodies (ISO and CEN)
  - Other fora (eSafety)

2. Guidelines, standardization and safety regulations (II)

- Legal relevance
  - Product liability
  - General product safety regulations
  - Vehicle type approval
    - EC type approval (Directive 70/156/EEC) and separate technical Directives
    - UN/ECE-regulations

3. Legal implications of driver fatigue monitoring systems for the driver (I)

Implications of driver hypo-vigilance systems for criminal liability of the driver

- General obligations in national traffic laws to drive in a safe manner, to pay full attention to the traffic, *to be in good physical condition*, etc.
- General criminal code provisions, i.e. provisions on the negligent killing or injuring a person

In criminal law it is required that the driver acted intentionally or negligently

- Negligence will be established in cases where the driver relied upon a hypo-vigilance system despite being aware of the shortcomings
- Because the driver is warned that he/she is no longer able to adequately drive his/her motor vehicle, ignoring a warning will be relevant for the question whether the driver acted negligently or intentionally

3. Legal implications of driver fatigue monitoring systems for the driver (II)

- Civil liability of the driver
- Fault based vs. strict liability regimes
- Fault-based liability regimes:
  - Requires some element of negligent behaviour
  - No liability if the driver/car owner acted carefully
  - Malfunctioning of the system may, at least in theory, serve as a defence for the driver

3. Legal implications of driver fatigue monitoring systems for the driver (III)

- Fault-based liability regimes:
  - Courts however, tend to apply high levels of care as the measure of conduct
  - Therefore it is highly unlikely that such a defence will ever succeed, given the fact that these systems are not 100% trustworthy.
  - Given the high standards of care applied by most national courts, ignoring a warning will easily constitute a breach of the driver's duty of care towards other road users.
  - Ignoring a warning may also constitute 'comparative negligence', i.e. a ground for lowering the rights to compensation because of own faulty behaviour (comparable to not wearing a seatbelt)

4. Liability of Manufacturers (I)

- European Directive on liability for defective products (85/374/EEC):
- Important harmonizing effect (but no complete harmonization of product liability law in EU)
- The producer shall be liable for damage caused by a defect in his product (article 1)

4. Liability of Manufacturers (II)

Definition of a defective product (art. 6)

A product is defective when it does not provide the safety a person is entitled to expect, taking all circumstances into account including:

- *The presentation of the product;*
- *The use to which it could be reasonably be expected that the product would be put;*
- *The time when the product was put into circulation.*

4. Liability of Manufacturers (II)

- Directive defines “defect” in terms of consumer expectations.
- No “hard and fast rules” to answer product liability questions in relation to ADAS
  - All circumstances are taken into account
  - Important factors are
    - The foreseeability of product risks (system flaws, behavioural adaptation of drivers, etc) for manufacturers and drivers
    - The availability of alternatives (more reliable or effective system design)
    - The presentation of the product (advertisements and instructions)

5. Liability of Manufacturers (IV)

- Liability risks may occur wherever there are indications that AWAKE-systems will have dangerous ‘side effects’ (e.g. over-reliance), which will be underestimated by drivers (false sense of security).
- Given the characteristics of driver fatigue warning systems (informing systems, risks of over–reliance will be quite clear for drivers) product liability risks can be estimated to be very limited, nor are there any indications that this will be an obstacle for the successful implementation.
- Manufacturers can minimize risks through adequate testing and product presentation. (RESPONSE II)

5. Driver hypo-vigilance systems in relation to drivers licence issuing policies (I)

- Legislator is searching for the right balance between traffic safety and the ‘right’ to personal mobility.
- To guarantee that only drivers are allowed to drive who are physically capable to drive, people with certain medical conditions (inter alia narcolepsy) are not granted a licence or only under certain conditions (regular medical check ups, technical adaptations to the vehicle, etc.).

5. Driver hypo-vigilance systems in relation to drivers licence issuing policies (II)

- Scientific or technical developments may lead to modifications in driver licence issuing policies (for instance because the effects of certain medical conditions were overestimated or because new treatments or medical devices are available to minimize the impacts of a medical condition on driving capabilities).

- In concept, driver fatigue warning systems may serve as conditional requirement for issuing a drivers licence if these systems prove to be a reliable and valid device for detecting driver fatigue and an effective instrument to counter the impact of the drivers impairment.

6. Driver hypo-vigilance systems in relation to working time regulations for commercial vehicles (I)

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Regulation of driving time and rest hours to reduce the impact of fatigue on driving safety

- Strong European character to create level playing field for transport-companies
- EEC-Regulation 3820/85 sets maximum driving times and minimum rest hours
- EEC-regulation 3821/85 (and European Directive 88/599/EEC) on recording equipment in road transport (tachographs).

6. Driver hypo-vigilance systems in relation to working time regulations for commercial vehicles (I)

- Balance is sought between traffic safety and economic interests
- Weakness of this type of regulation is that ‘time at the wheel’ may not be the most relevant variable to address the stated objective of reducing driver fatigue

6. Driver hypo-vigilance systems in relation to working time regulations for commercial vehicles (I)

- In concept, driver fatigue warning systems could allow for a more flexible, more effective and more acceptable driving hours regulation if
  - reliable and effective
  - strongly enforced

- Given the state of technology, as well as the current flaws in the enforcement of driving times regulations it is not likely that driver fatigue warning systems will, at least in the short term, become a substitute for a rigorous regime of enforcement of driving hours regulations

7. Insurance issues (I)

- Insurers may play a key role in the rapid deployment of driver fatigue warning systems
- If such systems contribute to reduce accidents automobile insurers will promote them
  - To reduce damage and therefore increase profitability
  - To show their commitment to safety

7. Insurance issues (II)

- To promote safety measures insurance companies may use ‘soft’ instruments (i.e. public campaigns, driver training, etc.). or ‘hard’ instruments such as premium reduction (if you drive a vehicle equipped with a driver fatigue warning system) or bonus-malus arrangements (no damage recovered if a warning was denied).
- Hard instruments are considered to be more effective.

7. Insurance issues (III)

- Current practice towards new (promising) technologies is mildly saying “less then optimal”
- Relevant factors
  - Market appeal of insurance product
  - Competition/sensitive relation with client
  - Investment costs (in case of after market installation)
  - Administrative costs
  - Market regulation

7. Insurance issues (IV)

- Differences between countries show the potential for a more active role of insurance companies
- Insurance products for fleet owners offers the best potential (more optimal cost/benefit ratio, more businesslike relation with the client)

8. Overarching issues of legal evidence and privacy in relation to driver hypo-vigilance systems (I)

- Issues of legal evidence in different legal contexts
  - Enforcement
  - Criminal and civil law
  - Insurance policies
- Potential benefits (of coupling driver hypo-vigilance systems) with an electronic data storage device
  - Objective data of system/driver performance for legal purposes
  - Positive effects on the behaviour of drivers
  - More en better real-world crash data for research purposes

8. Overarching issues of legal evidence and privacy in relation to driver hypo-vigilance systems (II)

The police/prosecutor

- How does the use of black box data relate to the legal principle in criminal law that a person is not obliged to self-incrimination ("Nemo cogitur prodere se ipsum")?
  - This principle is far from absolute. National legislators have provided for many exceptions
  - Exceptions however should be provided for by law (for example alcohol blood tests)
  - The principle mainly applies to oral statements, not to more 'objective' information such as (electronic) documents or blood

8. Overarching issues of legal evidence and privacy in relation to driver hypo-vigilance systems (III)

Civil parties

- Insurance companies may – in return for a premium reduction - stipulate access to data from the EDR in the insurance contract.
- National civil courts may draw negative conclusions from the fact that a driver withholds EDR-data.

Overarching issues of legal evidence and privacy in relation to driver hypo-vigilance systems (IV)

- The possible use of EDR-data in court against drivers may reduce driver acceptance, especially in case of voluntary use (equality)
- Legislators therefore may consider to make black boxes mandatory or to formulate restrictions on the use of EDR-data to be used as evidence in court.