

Verbreitung der Fahrassistenzsysteme bei der Fahrausbildung und –prüfung in Europa

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## Introduction to CIECA

- International association of driver testing organisations
- Members in <u>33</u> countries worldwide
- Active in driver training and testing
- International projects and working groups
- CIECA-VdTUEV-Workshop "Begleitetes Fahren / Accompanied driving", <u>14.12.06</u>



#### **Driver assistance systems: the issues**

- **1.** Embracing effective and easy-to-use driver assistance systems in training & testing
- **2.** Is it helpful or does it constitute an unnecessary distraction (for learner drivers?)
- **3.** Spreading awareness of the benefits, <u>and</u> preventing over-reliance (risk compensation)
- 4. What competencies need to be demonstrated in the driving test? Is the system a 'driver-aid' or driver 'replacement'?



## **Countries surveyed:**

- **1.** Belgium
- **2.** Finland
- **3.** France
- **4.** Great Britain
- **5.** The Netherlands
- 6. Norway
- 7. Spain
- 8. Sweden
- 9. Switzerland



## **Progress varies within Europe...**

- Countries are at different states of advancement on this issue
- Factors explaining this variation include:

  - Cars provided by the testing organisation (Sweden)
  - ✓ Low availability of new systems in driving school cars (France)
  - The types of cars generally available on the market, (high-cost country = old cars, e.g. Norway)



### Driver assistance systems in TRAINING

- Coverage in training largely depends on the structure of the driver education process:
  - **1**.<u>TEST-LED SYSTEMS</u> (training is dictated by the content of the test)

Driver assistance systems mostly not addressed (Britain, Holland, France...)

2.<u>HOLISTIC SYSTEMS</u> (training includes obligatory modules, going beyond the requirements of the test)

Potential exists for driver assistance systems to be built into training (Nordic countries...)



#### **Driver assistance systems in training II**

- **Sweden / Norway**: Obligatory Sicherheitstraining in initial training phase (ABS, ESP....)

- **Finland**: obligatory Sicherheitstraining in initial training + 2<sup>nd</sup> phase (ABS, ESP...)



## Training: Sweden

"Our obligatory skid course in initial driver training includes units on ABS and ESP with exercises between 45-75 kmh. ABS systems are now always activated in the training cars, because 60% of cars in Sweden now have ABS. ESP is still both activated and disactivated during training, in order to compare the two situations. The emphasis is on experiencing the effects of ABS and ESP, and combining this with risk awareness training. Our students should be aware of the limits of technological advances in the face of immutable physical forces, and should not become overconfident as a result. Other driver assistance systems are too exclusive at the moment to be introduced on a wide scale in initial driver training."



## **Training: Norway**

"Norway has a large number of small skid-pans, meaning a max. of 50kmh can be reached during training. However, with new technology such as ESP and others being brought in, these speeds may have to be increased if the new technology and its effect can be properly experienced and observed. This brings into question the whole concept of skid pan training in Norway and may lead to larger skid-pans being built in the future."



## **Training: Finland**

"We like to show the difference in specific situations of the behaviour of cars with or without ABS or ESP. For comparative purposes, this means sometimes disactivating the system in a training car. However, car importers have warned us that they cannot be held responsible if a driver assistance system is disactivated and something happens as a result. They claim that disactivation could lead to technological malfunctions or to legal problems in the event of an accident which could have been prevented by the system in question. These legal implications have now affected our thinking regarding both training and testing".



#### **Driver assistance systems in TESTING**

Possible approaches for deciding what should be allowed in the driving test:

a) Approving or rejecting individual driver assistance systems on a case-by-case basis (possibly within general guidelines)

b)Allowing in principle all new forms of driver assistance systems



#### A) Case-by-case approach

Approach used - at this stage - in Holland, Britain and Spain, because:

- 1. Driving examiners must be able to assess the basic driving competencies of the candidate
- 2. Some driver assistance systems take over responsibility for these competencies (e.g. ParkAssist)
- **3.** The candidate will most probably use less well equipped cars in the future, and therefore needs to have the full range of basic driving competencies
- 4. Some driver assistance systems may constitute an unnecessary and unhelpful distraction in the learning process (e.g. Satellite Navigation systems)



# A) Case-by-case approach: Holland

ALLOWED IN THE TEST?	SYSTEM NAME
YES	Rain sensor
YES	AHO (automatic headlight on)
YES	EBL (emergency braking lights)
YES	BLISS (blind spot information system)
NO	ACC (adaptive Cruise control)
YES	basic Cruise control
NO	LDWA (lane departure warning)
NO	Parkassist
YES	Parking sensors
YES	Cornering lights
YES	Reversing camera
YES	Corner camera



#### A) Case-by-case approach: Holland II

"In general we don't want to stand in the way of new developments." But the basic starting point is that we will not permit any system which takes over one or more of the basic tasks of the driver. We must always be able to assess these basic tasks and be able to reach a judgement on the skills of the candidate. Practically speaking, most new systems will be allowed and we expect the candidate to be aware of then and be able to use them independently. An example of a system which is not permitted at the moment is 'parkassist' from Toyota, whereby the on-board computer takes over from the candidate the full steering capability of the car. The extent to which the technical device is widespread is also important. So it is quite feasible that, when the majority of new cars are equipped with these systems, they must then be allowed in the test."



## A) Case-by-case approach: Britain

General guidelines are being currently developed, along the lines of:

- In general, allowing safety-oriented driver <u>assistance</u> systems (driver 'assistance' emphasises that it only assists the driver and the driver is still required to contribute to the driving task)
- Forbidding systems that fully remove the responsibility of the driver from a particular task (i.e. driver <u>replacement</u> rather than driver assistance).



# B) In principle, allowing all driver assistance systems in the test

#### Rationale:

- 1. Impractical to decide on a case-by-case basis
- 2. Futile trying to block inevitable technological developments
- 3. BASIC ISSUE: The requirements of the test must be met, regardless of the means used to meet these requirements
- System must be standard or option; no prototypes
- Switzerland: "The test vehicle should not be equipped with any <u>unusual</u> systems which aid driving" (③)



#### **Driving test in Sweden**

"In a few years time, Sweden may have to get a new fleet of test cars which is equipped with some of these new technologies. In the meantime, we can properly test out the new systems, and see what is effective, easy to use and does not provide an unnecessary distraction to the immediate driving task, or to the training/testing process."



#### **General Conclusions**

- Some countries are more advanced than others in this debate
- Explanations for this variation include:
- 1. The type of driver education process (accompanied driving?)
- 2. The prevalence of cars with 'new' driver assistance systems in the country in question



#### **Conclusions regarding driver training**

- Countries with obligatory training modules are in general well positioned to adapt to new driver assistance systems (e.g. Nordic countries)
- Countries with test-led systems are likely to react less well



#### **Conclusions regarding driver testing**

- Some countries prefer to accept in principle all forms of driver assistance
- Other countries prefer to regulate on a case-bycase basis
- France: no debate at all (yet!)

