PRESS DOSSIER:

euroFOT, bringing intelligent vehicles to the road

The eight intelligent in-vehicle systems under test

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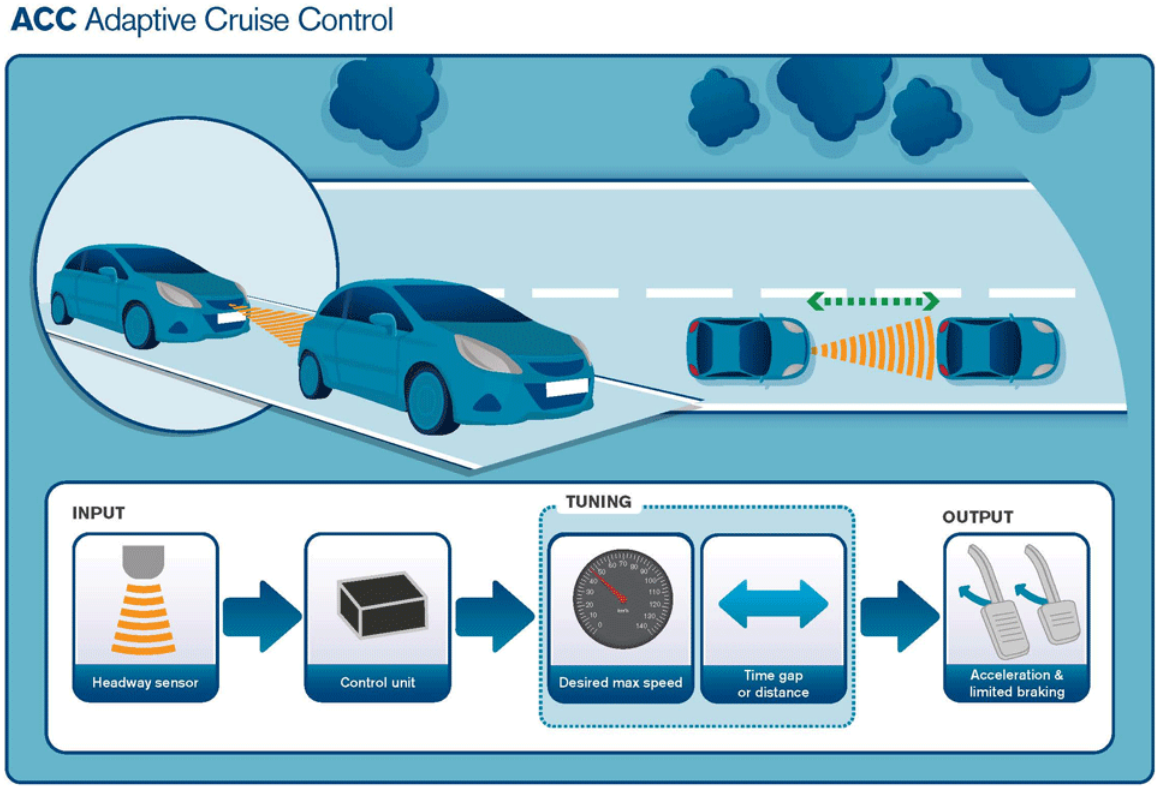
Adaptive Cruise Control

Adaptive Cruise Control (ACC) uses headway sensors to continuously measure the distance to other vehicles, automatically adjusting the speed to ensure the vehicle does not get too close to the one in front. The driver activates the cruise control by setting the desired maximum speed and then selecting the time gap to the vehicles in front. ACC then adjusts the vehicle's speed to match that of preceding vehicle as necessary.

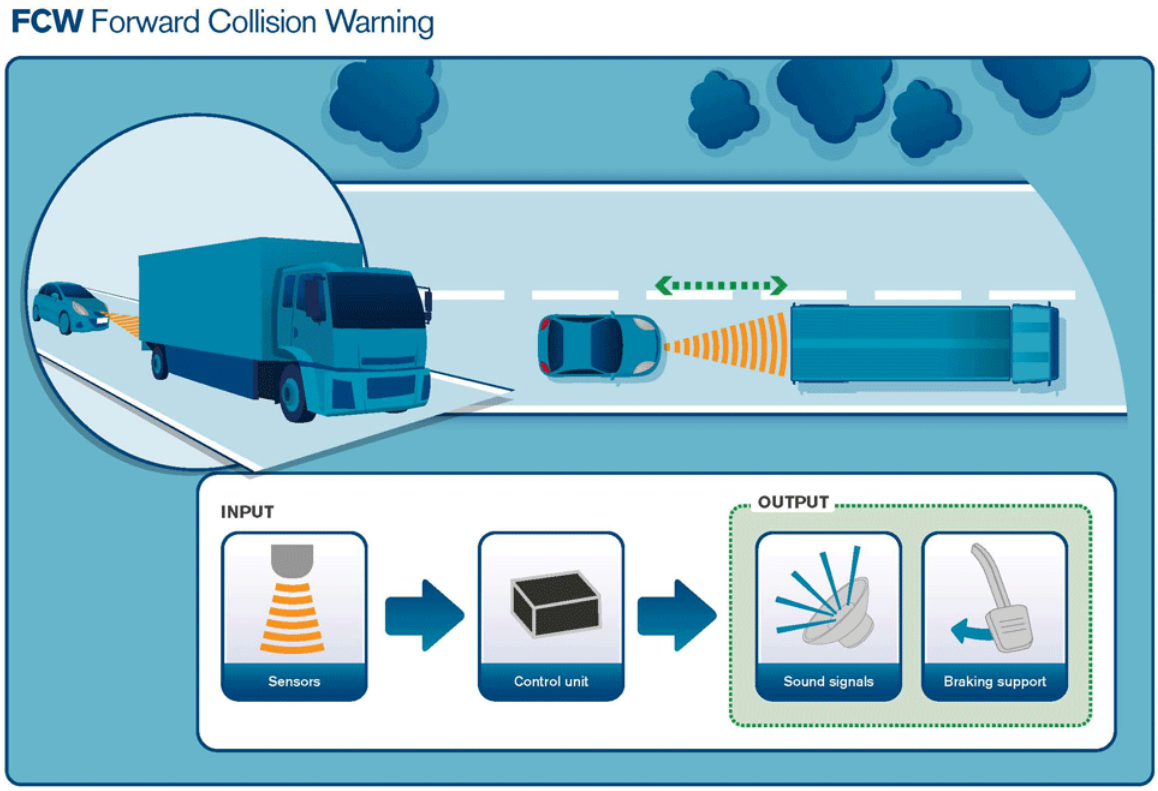
ACC will be tested by Ford, MAN, Volvo Cars, Volvo Trucks and Volkswagen:



Forward Collision Warning

Forward Collision Warning (FCW) can help avoid rear-end impacts or minimise the effects of these type of collisions. A radar installation continuously scans the area in front of a vehicle. If it then approaches too close to another vehicle, then the drisver is alerted via sound and light signals. If the risk of a collision increases despite the warnings, the brakes are pre-charged to prepare for efficient braking by the driver. When a collision is imminent and the driver does not react, the car automatically brakes to reduce the impact of the accident. There are variations in the level of implementation of brake support in different models. (some models will only have FCW).

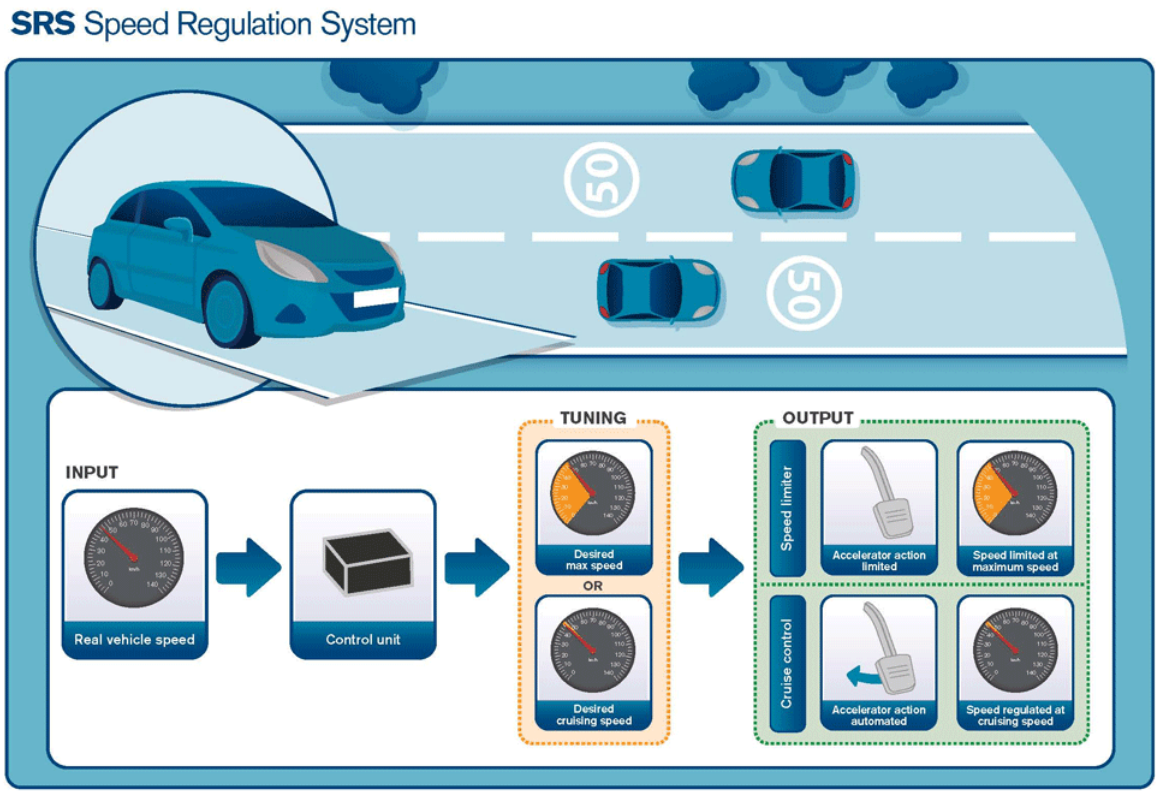
FCW will be tested by Ford, MAN, Volvo Cars and Volvo Trucks.



Speed Regulation System

Speed Regulation Systems include Speed Limiter and Cruise Control. These two widely available functions help the driver to manage his speed and cannot be used simultaneously. The speed limiter limits the speed below the selected value. The cruise control regulates the speed at the programmed value.

SRS will be tested by CEESAR on Renault cars.



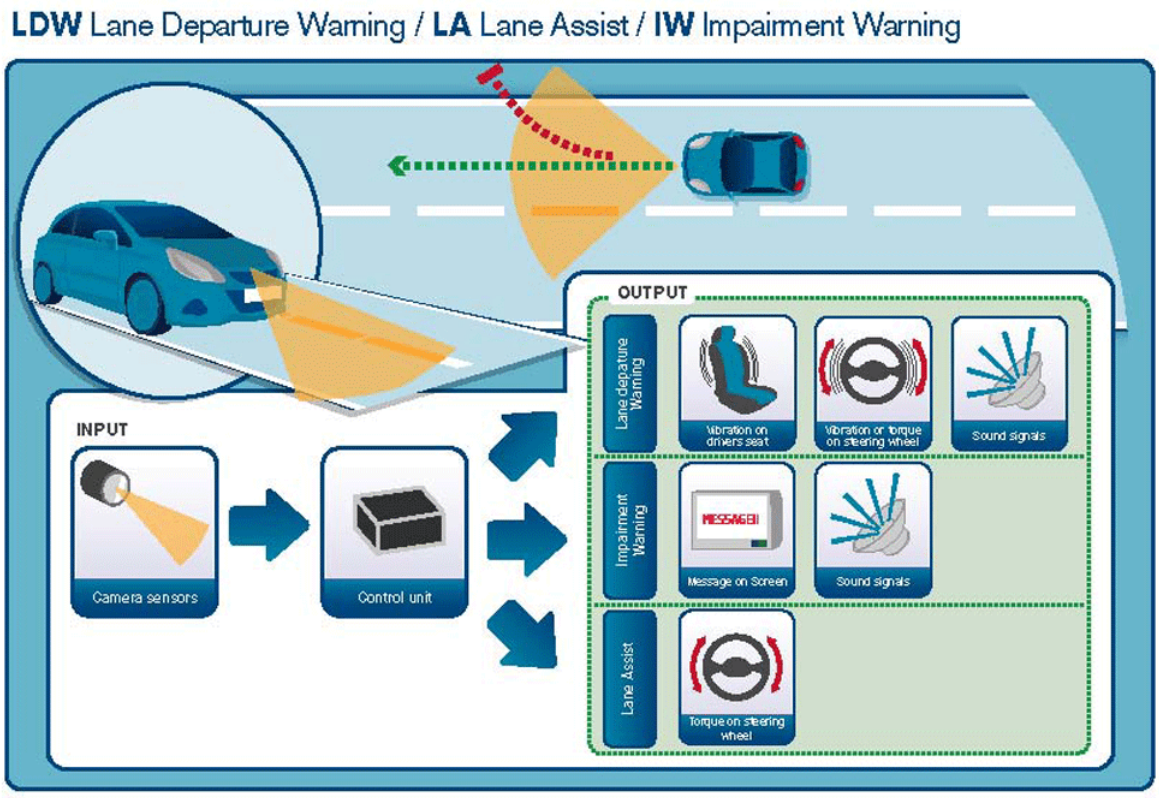
Lane Departure Warning/Lane Keeping Assist/Impairment Warning

Lane Departure Warning (LDW) assists the driver to maintain his/her lane position, giving a warning if the vehicle crosses lane markings unintentionally. The warning can be acoustic or haptical (vibration or small torque on the steering wheel or driver's seat).

The system maintains the vehicle position by detecting lane markings or street boundaries via a video sensor. A warning occurs only above a certain minimum speed. Specific driver actions, e.g. setting the indicator, suppress the warning. The system is intended to operate on highways or equivalent roads, and can if necessary be switched off by the driver.

Impairment Warning (IW) alerts tired and distracted drivers. A camera monitors the car's movements between the lane markings and calculates the risk of the driver losing control of the vehicle. A message in the display advises the driver if it is time to take a break

LDW and IW will be tested by Fiat, MAN, Volkswagen, Audi, Volvo Cars and Volvo Trucks.



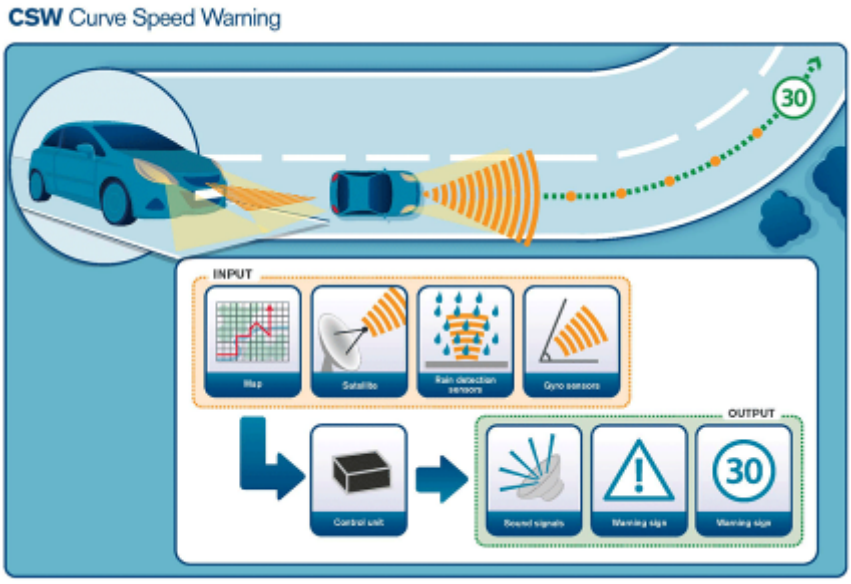
Curve Speed Warning

Curve-speed warning (CSW) technology has been developed to help drivers identify potentially dangerous situations if a bend in the road is taken too fast, and warn the driver in advance allowing him time to react properly. The information about such bends is drawn from pre-existing digital maps of the road and analysis of the geometric characteristics of the bend. By combining this information with external factors such as weather conditions and estimates of road friction, the maximum recommended speed for the bend is estimated. If the vehicle is approaching at a speed higher than the recommended value, the system can warn the driver of the potential hazard, prepare the safety systems in the vehicle, or actively inhibit further acceleration of the vehicle.

The overall performance of digital map-based CSW can be significantly improved with the addition of vision-based sensors such as Lane Detection and Tracking (LDT) and vision-based rain sensing. The lane-detection module can provide additional information about the shape and distance to the approaching bend, refining in this way the estimate of the maximum recommended speed. The vision-based rain sensor is able to detect rain-drops on the windshield and estimate the reduced road friction, an important parameter for the CSW module.

In addition to warning signals and active interventions, CSW may also assist the user during night driving by means of adaptive front lighting (AFL). This technology is able to adapt the shape, intensity and direction of the light beam to follow the direction of the road. By adjusting the direction of the light beam, AFL can prepare the driver for oncoming bends and guide him/her in the right direction, even before he/she can see the bend. This technology also helps reduce the blinding effect from the headlights of oncoming vehicles, offering increased driver comfort as well as improved vehicle safety.

Curve Speed Warning will be tested by Ford.



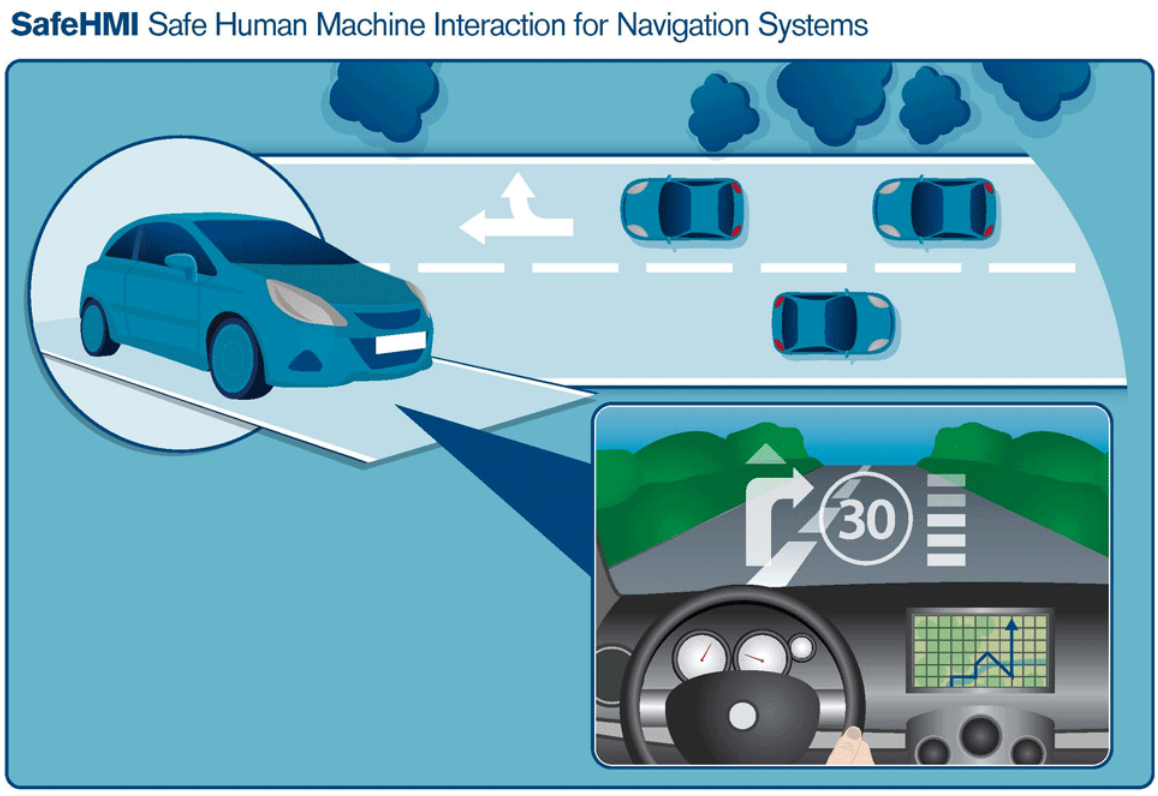
Safe Human Machine Interface - Navigation

For all in-vehicle information and communication systems intended for the use while driving, such as navigation systems, a safe human/machine interface is essential.

Navigation system: the navigation system provides location and route guidance information to the driver. Diverse systems (e.g. OEM fitment, after-market solution) with different display positions and technologies (e.g. central information display, head-up, or separate detachable display) are already on the market.

The main research questions are: Influence of navigation systems on driving safety, efficiency and driver behaviour, comparison of mobile navigation systems and fixed navigation systems (Safe HMI).

SafeHMI will be tested by BMW Group and Daimler.



Fuel Efficiency Adviser

Dynafleet, a transport information system from Volvo Trucks provides in real time the current location of vehicles, their fuel consumption, messages, driver times, service intervals and much more. Fuel-efficient driving, or eco-driving, is supported through on-board functions for the driver as well as follow-up reports in the back-office system Dynafleet Online.

FEA will be tested by Volvo Trucks.