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of driver-assistance systems that build on dialogue between drivers, electronic functions, and the surrounding traffic environment, making the vehicle itself more or less automated depending on the circumstances.

Volvo's latest technological solutions in the field of active safety include Automated Queue Assistance, a function whereby the vehicle accelerates and brakes automatically at low speeds, for instance in slow-moving traffic tailbacks.

Volvo Trucks also made a major investment in an EU project entitled "Highly Automated Vehicles for Intelligent Transport" (HAVEit), that

is working on intelligent next-generation vehicles featuring advanced driver-assistance systems. HAVEit trucks feature E-horizon, which links to map databases to provide the driver with information about hills, curves, and junctions ahead on the route. The driveline is accordingly adapted so that progress is as efficient and economical as possible.

Volvo is involved in the international Safespot project and the Co-operative Vehicle Infrastructure Systems (CVIS) project. Safe-spot examines how tomorrow's cars and trucks can communicate with one another and with the surrounding infrastructure, and has defined and

tested various applications based primarily on the vehicle, such as safety in junctions, warning of frontal impact, warning of poor road surface, or detection of cyclists and pedestrians. The CVIS project focuses on infrastructure-based applications.

These applications encompass speed alerts, warnings of accidents on the road, and the creation of safety margins for emergency rescue vehicles, among others. The driver receives the information via a display screen or in the form of audio/visual signals in the vehicle cab. However, the information can also be transmitted via signs or flashing lights at the side of the road. **TTH**

Device helps drivers see around corners

A device to see around corners and eliminate blind spots will help truck and bus drivers to maneuver more safely. Alpine's (www.alpine.com) Multi Camera technology is linked with a navigation database, offering the ability to see all aspects of the vehicle and its surroundings, eliminating dangerous blind spots when turning, parking, or changing lanes.

A front-mounted camera shows the view to the left and right as well

as straight ahead. The information is displayed on a screen in the cab. Cameras on the side of vehicle eliminate blind spots, which is a particular problem for left-hand drive trucks in the UK.

The array of cameras can be combined to provide a real-time "top view," giving the driver a view of the vehicle in its surroundings to enable him to park or maneuvering safely.

The technology works by processing multiple camera views together with road information from a navigation database. Complex processing ensures the information is presented in real-time, even for larger vehicles such as articulated trucks or buses.

The first prototypes have been tested on cars, but Alpine believes the safety aspect is much more relevant for larger commercial vehicles. Likely to be a factory fit, Alpine suggests that the technology could be on the road in less than three years. **TTH**

Mobile phone operators sign up for eCall

eCall is one of the priorities of the Intelligent Car Initiative and the Intelligent Transport Systems Action Plan promoting the use of information and communication technologies (ICT) to achieve smarter, safer, and cleaner road transport. The mobile phone industry has now given full backing to eCall, Europe's in-car automatic emergency call system. Representatives of the industry's GSM Association (www.gsmworld.com) underlined their commitment to this life-saving technology by signing the EU's Memorandum of Under-

standing to implement eCall across Europe.

eCall automatically dials 112, Europe's single emergency number, when a car has a serious accident and sends its location to the nearest emergency service—even when passengers do not know or cannot provide their location. Rolling out eCall requires close cooperation between public authorities, car companies, and mobile phone operators, and could save up to 2,500 lives each year in the European Union (EU) when fully deployed and reduce the severity of injuries by 10 to 15%.

"Last month, the European Commission called on Europe's governments and telecoms and automotive industry to do more to put eCall on the road. I congratulate the mobile phone industry for answering so promptly. By backing Europe's in-car emergency call system, they have shown their social responsibility and openness to innovative applications of communications technology in daily life," said Viviane Reding, the EU's Telecoms Commissioner. "However, the roll-out of the pan-European eCall needs everyone's co-operation. Mobile phone operators have shown

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their commitment to eCall, joining car industry and the majority of EU countries. Six Member States have still not signed the eCall Memorandum of Understanding—Denmark, France, Ireland, Latvia, Malta, and the United Kingdom. They should now take their foot off the brake and speed up the introduction of a system that can save lives. Otherwise, the Commission will need to propose legislation next year.”

Spanning 219 countries, the GSM Association unites nearly 800 of the world’s mobile operators and more than 200 companies, including handset makers, software companies, equipment providers, internet companies, and media and entertainment organizations.

To fully deploy eCall, Europe’s car and telecoms industries and national administrations in all EU countries, must ensure that their emergency services, especially call cen-

ters, are equipped to handle eCalls. Although the technology is ready and common pan-EU standards have been agreed by industry and emergency services, the six countries listed above are still not ready to commit, mainly for cost concerns.

Fifteen EU countries (Austria, Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, Italy, Lithuania, Portugal, Slovakia, Slovenia, Spain, the Netherlands, and Sweden) as well as 3 European Economic Area (EEA) countries (Iceland, Norway, and Switzerland) have agreed common arrangements for implementing eCall. Another 6 EU countries (Belgium, Bulgaria, Hungary, Luxembourg, Romania, and Poland) support eCall and are willing to sign the agreement. The European Parliament is also a strong supporter of the roll out of eCall in cars across Europe.

In August, the Commission called on EU countries and Europe’s car and telecoms industry to do more for the

start of eCall in Europe. The Commission outlined a strategy for speeding up the introduction of eCall in all new vehicles (of all brands and countries of origin) across Europe. The technology would be open to all, and would use the single European emergency number.

The Commission has funded eCall projects that make sure the technology works across borders (E-MERGE and GST-Rescue) and has further supported work on eCall through industry cooperation via the safety Initiative. In the last two years, the EU provided around €160 million (US\$236 million) for research into ICT for transport. Road accidents cost the EU economy more than €160 billion per year. Equipping all 230 million cars in the EU with eCall could save €26 billion (US\$38 billion) annually. The eCall system will also make it easier to manage road traffic congestion and to install services like satellite navigation in cars. **TIH**

Detection system developed by VTT Technical Research of Finland

VTT Technical Research Centre of Finland (www.vtt.fi) developed a Vulnerable Road User (VRU) system to warn drivers. The system detects pedestrian, bicycles, or animals and sends a warning message to drivers about living objects in a dangerous traffic environment such as a motorway exit. The system is part of a cooperative traffic safety system, developed by

the SAFESPOT project, which facilitates communication between vehicles and the traffic infrastructure.

This is probably the first roadside sensing system that detects living objects using thermal imaging technology interfaced as part of a cooperative intelligent traffic safety system. The advantage is that an expensive thermal camera is not needed in the

vehicle; a warning of a risky situation can be transmitted to each passing vehicle.

Identification is based on a thermal vision system that uses image analysis (speed, size, shape, and temperature information) to detect humans and other animals. The system is integrated into a sensor fusion module which sends data to a local dynamic maps database modelling the driving environment. The system is being tested on a motorway in Turin, Italy. **TIH**

Toyota develops onboard short-range communications unit

Toyota Motor Corporation (TMC; www.toyota.com) develops a next-generation onboard DSRC (dedicated short-range communications) unit intended to increase traffic safety by

providing drivers real-time, close-visibility traffic information. Toyota Motor plans to offer the DSRC unit in Japan on a new vehicle model. The navigation-system-linked dedi-

cated short-range communications or DSRC unit, through the use of intelligent transportation systems technologies, including Japan’s electronic toll collection framework, receives a wide range of traffic information via vehicle-infrastructure communications

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