PRESS RELEASE

AKTIV: An active approach to mobility.

Federal support for new research initiative of high-technology German companies: 60 million Euros for active traffic safety and smooth traffic flow.

A new initiative has begun in Germany with the goal of actively improving traffic safety and maintaining a smooth flow of traffic. To this end, a consortium comprising 28 partners of the automobile, electronics and telecommunications industries, software companies, research institutions, and the transport authorities has launched the **AKTIV** research initiative (**A**daptive and Cooperative **T**echnologies for **I**ntelligent Traffic.).

This cooperative traffic research initiative will continue until mid-2010. The partners will focus on three main research goals. As Eberhard Hipp, AKTIV Program coordinator and Head of Advanced Technical Development at MAN Nutzfahrzeuge explains: “First, we are developing novel driver assistance systems, providing a higher standard of traffic safety for all involved. Second, we are coordinating innovative traffic management technologies in order to improve the efficiency of the road transportation network. Our third goal is to optimize targeted transmission of traffic data via mobile communication networks.“

A total of 60 million Euros (about $80 million) are budgeted for this research initiative. The Federal Ministry for Economy and Technology (BMWi) will fund about 45 % of the costs, with the goal of significantly contributing to implementing the government’s high-technology strategy.

Sensitive Assistance

The project **Active Safety** will concentrate on acutely hazardous traffic situations, requiring development of visionary assistance systems. In the case of an imminent rear-end collision, “active hazard braking” will intervene. This automatic braking system will be designed not only to reduce the severity of impending rear-end collisions, but also to anticipate and avoid them, thus advancing a key step beyond currently available emergency braking assistance. A lateral monitoring and control system is being developed to prevent vehicles from running off the road (roadway departure). This system will support the driver in lane keeping and in changing lanes

-- for example, in narrow passages through construction zones. Intersection assistance is being designed to support the driver during left turns and other complex traffic situations. In addition to these assistance systems, sensors and algorithms are being developed for early detection of hazardous situations involving pedestrians or cyclists and for initiating effective protective actions.

A sensor capability common to all applications is being developed for reliable measurement of the vehicle environment and the driver's attention state: This information basis is required for these assistants to act effectively and initiate a response appropriate to the situation. They are like a perfect traveling companion: constantly on the alert, always ready to help, but remaining unobtrusively in the background. The automobile industry and suppliers are closely coordinating their development efforts in this project so that novel functions can be implemented in a large variety of vehicle types and will be available to a wide range of users.

Teamwork in the traffic system

In the **Traffic Management** project, a cooperative information network is being developed to increase the efficiency of the roadway system. The aim is to reduce the traffic jam risk by 15% while increasing traffic capacity by 10%. To this end, the partners are developing a common traffic management system connecting guidance and flow control systems with drivers: This will be achieved by linking traffic information centers to communication–enabled traffic infrastructure (e.g., traffic signals, variable message sign units) or directly to vehicles. With the Traffic Management project, new applications using "car-to-infrastructure" communication (C2I) will be developed and tested. To this end, the required technologies are being refined for implementation in the vehicle; at the same time, intelligent traffic guidance systems are being developed will adapt continuously to the current traffic state. The new systems will be tested by a comprehensive field trial as a cooperative effort between the automobile industry and the traffic authorities in the state of Hessen.

Information on traffic state and road conditions via "AutoMobilComm"

A reliable communication infrastructure with complete coverage based on international standards is a prerequisite for cooperative driver assistance functions and efficient traffic management. Thus, the associated project **Cooperative Cars** will match the capabilities of current and projected mobile communication networks to the technological requirements of a range of applications. The project will investigate the

technological basis for data exchange via inter-vehicle communication or via communication between vehicles and traffic information systems. For example, mobile communication can be used to send up-to-the-minute traffic and road condition data from individual vehicle sensors to traffic information centers. There, the data from many sources can be combined and processed intelligently to power valuable applications. The resulting high-level information could be sent to regional traffic guidance systems or coded and targeted to individual vehicles in the form of travel information or advisories.

On the basis of this research, prototypes will be implemented and experiments conducted to provide know-how for technological advancement in this key field. The Federal Ministry for Research and Education (BMBF) is supporting this project with 2 million Euros (about $2.6 million) in funding. It is being carried as a close cooperation between leading communication and automobile companies in order to ensure seamless technology transfer within this interdisciplinary consortium.

AKTIV stands for “Adaptive and Cooperative Technologies for Intelligent Traffic.“ Twenty-eight partners are participating in this German research initiative: automobile manufacturers and their suppliers, electronics and telecommunication companies, research institutes, as well as public road and traffic authorities. With the goal of making future traffic safer and more efficient, the partners will cooperate through mid-2010 to develop new systems for driver assistance and efficient traffic management, as well as adapted vehicle-infrastructure and inter-vehicle communication systems.

The research partners of the initiative include Allianz, Audi, BMW, Bosch, Bundesanstalt für Straßenwesen, Continental, DaimlerChrysler, DDG, Ericsson Eurolab R&D Germany, Ford, Verkehrszentrale Hessen, HTW Saarland, IBEO, IFAK Magdeburg, MAN Nutzfahrzeuge, Opel, PTV, Siemens, TU München, Teleatlas, Transver, Uni Hannover, Uni Kassel, Vodafone Group R&D Germany and Volkswagen. Numerous university institutes as well as small to medium-sized companies are also contributing to the projects as subcontractors.

Further information is available at www.aktiv-online.org

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