

Press Release

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## **German Companies Launch Research Initiative INVENT**

- **Making Traffic safer and more efficient**
- **76 Million Euro invested in the future of mobility**

One of the greatest challenges in sustaining mobility is to improve traffic safety and keep traffic flowing in the face of growing demands on our roadway networks. Avoiding accidents and reducing congestion by making traffic itself intelligent: these are the goals of the research initiative INVENT (Intelligenter Verkehr und Nutzergerechte Technik = intelligent traffic and user-friendly technology) . Within the German federal program “Mobility and Transport”, the INVENT consortium unites the talents of 23 partners, including automobile and electronics manufacturers, information technology and software companies, and research institutes, to achieve the goal of INVENT. With a budget of over 76 million Euros, the INVENT consortium will develop new driver assistance systems and sophisticated information services based on advanced intelligent technologies in the coming four years. Funding from the Federal Ministry for Research and Education (BMBF) will cover 45 % of the costs.

The initiative will build on the achievements of previous cooperative projects in traffic research such as PROMETHEUS and MOTIV. Continuity in transport and traffic safety research support will provide an important contribution toward maintaining and strengthening the market position and competitiveness of industries in Germany.

Parallel to the development of innovative products, an important goal of the cooperation is to identify and establish new technological standards. Considering the potential societal impacts of new intelligent transport technologies, the consortium will work closely with the responsible public agencies in order to coordinate public and private strategies and to create an environment conducive to the introduction of the technologies. Several of the companies are also active in international traffic and transport projects. At the end of the four-year research program, the INVENT- participants will present their vision of intelligent vehicles and

traffic networks of the future, using demonstrator vehicles and simulation. While focussing on improved traffic safety and efficiency in the face of rapidly growing traffic demand, INVENT will seek environmentally and user friendly solutions offering increased comfort and convenience.

### **Teaching cars to see, think, and talk**

In a key focus of the research initiative, available functions such as automatic cruise and headway control will evolve into even more sophisticated “driver assistance systems.” For example, the project “**Active Safety Assistance for Drivers**” will develop a congestion assistant, supporting the driver in stop-and-go traffic by intelligently regulating headway and speed relative to the preceding vehicle. Safety systems with a far-sighted and comprehensive view of the road will be designed to anticipate safety critical situations, preventing accidents or at least reducing their severity. The concept is designed to protect not only vehicle occupants, but also other potentially vulnerable people at intersections, such as pedestrians and bicyclists. By anticipating potentially dangerous situations, the new driver assistance systems could significantly improve safety by issuing timely warnings or even initiating a protective response.

In a second project, „**Traffic Management 2010**“, the INVENT partners will tackle the problem of traffic jams and devise strategies to relieve congestion in population centers. Two sophisticated approaches will be applied: In driver assistance systems, it will be possible to “tune” speed & headway control as well as lane-changing assistance for optimal traffic flow performance. Future navigation systems will receive up-to-date information on current (or even predicted) sources of delay such as construction sites or local congestion. They will use this information to provide drivers with the best alternative routes to their destinations, taking into account public traffic management policy, safety, and environmental considerations. One data basis for both developments will come from vehicles that automatically communicate, either directly with each other, or indirectly via a central hub. In the future, drivers will be warned by preceding vehicles in time to prepare for -- or avoid - dangerous situations.

A large proportion of traffic in population centers – about 40 % - is generated by pick-ups and deliveries. A third proposal that has been submitted to the BMBF, „**Traffic Management in Transport and Logistics**“, is designed to investigate how for

example truck deliveries can best be routed considering the current state of traffic flow at all points in the road network.

Future driver assistance should not only be intelligent, but must also offer the driver simple and intuitive operation without diverting his attention from important tasks. Hence, the scientists in INVENT are also devoting considerable efforts to the complex subjects of human-machine interactions, user acceptance and impacts on traffic, as well as legal issues.

The companies and institutions participating in the research initiative INVENT are Audi, BMW, Bosch, DaimlerChrysler, DLR, Ericsson, fka, Ford, Hella, Hermes, IBM, IFAK, MAN Nutzfahrzeuge, NavTech, Opel, PTV, Siemens AG, Siemens Restraint Systems, Siemens-VDO, Transver, TÜV- Rheinland, Cologne University, and Volkswagen. In addition to these partners, many university institutes and a large number of small and medium-sized companies will also contribute as subcontractors to INVENT.

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