PRESS RELEASE

VMTL Presentation in Munich, March 1, 2004

Delivered on time: the courier service of the future

The research project VMTL demonstrates its first prototypes

Not again! A note in your mailbox from the parcel service: “Sorry we missed you.”

This will soon be a thing of the past. Hermes Courier Service, together with DaimlerChrysler, Ericsson, IBM and PTV AG has presented a solution to avoid wasted courier trips, ensure accurate delivery times for customers, and reduce urban traffic congestion. These five companies are cooperating in the project Traffic management in transport and logistics (VMTL). VMTL is one of three projects within the INVENT research initiative supported by the Federal Ministry of Education and Research in Germany.

At present, a large proportion of all urban traffic (estimated at forty percent) is already caused by pick-ups and deliveries, and the trend is increasing. The growth of mail orders and e-commerce is leading to steadily increasing number of small parcel deliveries as well as return shipments. At the same time, customers expect courier services adapted to their individual needs. What about the typical single professional on the go, never at home during business hours? When – and especially *where* – can a courier reach such customers?

To address this and other problems in logistics, the partners initiated the VMTL project two and one-half years ago. In a cooperative effort, they are developing new logistic concepts and systems for more efficient commercial traffic within the so-called “last mile”. The goals include reducing urban demand and congestion, increasing the success rate for deliveries, and improving customer service quality by implementing novel strategies and technologies. Two prototypes known as Scenario 2005 and Scenario 2010 have been defined to reflect different stages of development.

The researchers have now demonstrated their first prototype at the Hermes Depot in Garching (near Munich), providing a glimpse of how courier services could work in the future. The project partners have combined existing data acquisition and transmission technologies, such as GPRS and Bluetooth, with new modeling tools for tour planning and control. Due to improved information streams, the control system has access to a detailed knowledge base including the present traffic state, the current positions of all delivery vehicles, as well as the availability profile of the customer – e.g., whether the customer is more likely to be at home or at the office during the afternoon. Using this knowledge base, the courier can predict the delivery time quite accurately.

Dynamic re-routing of delivery vehicles

When goods are ordered, the customer initially provides a description of when and where he can be reached – for example, at the office during the morning or at a friend's home during the evening. During the evening prior to the delivery, the VMTL system processes this information in a Tour Planner and informs the customer of the time and point of delivery. During the day of delivery, the logistic center continually monitors the courier vehicle positions and updates the tour routes taking into account the most recent traffic state information. The system dynamically adapts to short-term influences; these may include incoming new orders or last-minute modifications of the customer's desired time or point of delivery – or formation of traffic congestion on a route. If the Tour Supervisor determines that the delivery plan needs to be modified, the customer is promptly notified, and the appropriate tour modification is directly transmitted to the affected driver.

From the beginning of February until the end of March, 2004, the so-called "Scenario 2005" will be implemented in the Hermes fleet and tested within a zone in the north of Munich. This test will probe feasibility, performance, and customer acceptance of the technology. A year later, the VMTL partners aim to demonstrate the visionary "Scenario 2010" using futuristic technologies.

Synergies with other INVENT Projects

Results obtained in the two other INVENT projects constitute an important resource utilized by the VMTL partners in developing their system. The project **Traffic Management 2010** is dedicated to the development of solutions for improved,

“intelligent” traffic flow, including vehicle-centered methods for prevention or reduction of congestion and strategies for avoidance of delays. The dynamic navigation systems developed in this project will provide route guidance utilizing the knowledge base of current and forecasted traffic state information as in VMTL. The systems will provide customers with an optimal route, avoiding backups at malfunctioning traffic lights and navigating detours along the way. The route guidance will be coordinated with public traffic management, traffic safety, and environmental strategies, e.g., by automatically avoiding unnecessary traffic in quiet residential areas.

The third INVENT project **Driver Assistance / Active Safety** is developing driver assistance systems to support the driver and reduce the driving burden. The vision: vehicles that detect dangerous situations autonomously and react appropriately via a human-machine interface. They acquire data and reconstruct a “picture” of the vehicle driving environment by special sensor designs, inform the driver of road conditions and preceding vehicles, and, in an emergency, are capable of intervening in drive train, braking, and steering.

INVENT

INVENT (Intelligent traffic and user-oriented technology) is a research initiative with the goal of making future traffic safer and more efficient. To this end, the partners are cooperating to develop novel driver assistance systems, information technologies, and solutions for efficient traffic management. The four-year research initiative will continue until 2005 and is being supported by the Federal Ministry for Research and Education (BMBF) in Germany. The 24 partners participating in the research initiative INVENT include Audi, BMW, Bosch, DaimlerChrysler Research and Technology, DLR, Ericsson, fka, Ford, Hella, Hermes, IBM, IFAK, MAN, Navigation Technologies, Opel, PTV, Siemens Inc., Siemens Restraint Systems, Siemens VDO, Transver, “TueV, Cologne University, the law firm Vogt & Co., and Volkswagen. In addition to these partners, many university institutes and a large number of small and middle-sized enterprises are also contributing as subcontractors to INVENT. This continuing research in the area of traffic management and safety will strengthen the competitiveness of industry in Germany. Further information is available at www.invent-online.de.

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