# FAV BERLIN - INNOVATION MANAGER FOR TRANSPORT AND MOBILITY BERLINBRANDENBURG

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### EDITORIAL

Due to an internal re-organisation of the Technology Foundation Berlin (TSB) - FAV's "parent company" – we have established a new modified logo and some new elements for our corporate identity within the TSB Group. By the beginning of 2007, the leadership of the FAV has been transferred from Wolfgang H. Steinicke to Thomas Meissner, whereas Wolfgang Steinicke further on supports FAV tasks, e.g. as the Secretary General for the EURNEX European Rail Research Network of Excellence.

However, the trademark "FAV Berlin" remains and FAV's mission remains the same – to strengthen the Center of Excellence for Transport Technologies in the German Capital Region – by developing creative networks covering industry, scientists and authorities and by initiating and sometimes coordinating of innovative R&D projects on regional, national and international level.

The recently started FP 7, onto which FAV put a lot of resources for project preparation with partners, is definitely an excellent programme to launch future oriented projects. But there are further opportunities for international cooperation: With this newsletter you will learn more about the Asia-Pacific-Weeks in Berlin, September 2007.



Than life

Thomas Meissner Managing Director FAV Berlin/TSB



# THE FAV AT THE ASIA-PACIFIC WEEKS 2007

This year's highlight of cooperation with Asian regions are the 6th Asia-Pacific Weeks (APW) in Berlin from September 10th to 23rd, 2007. The APW are an initiative of the Mayor of Berlin and take place every two years. They create a platform for political, economical, cultural and scientific exchange with partner countries in the Asia-Pacific region and demonstrate Berlin's function as "Gateway to Asia".

The FAV organises the event "Ur-

ban Transport & Mobility Cluster", corresponding to the main topic of this year's APW: "Asia-Pacific changes the world." During their tenth anniversary, the Asia-Pacific Weeks are dedicated to the influences of the Asia-Pacific region on the western world, especially the change in metropolitan areas. This to-



pic is extremely important, as large urban areas must increasingly establish global networks to guarantee sustainability of their complex infrastructures. The event "Berlin-Brandenburg's Transport & Mobility Cluster meets Asia" is divided into five parts:

- The opening event with introductive presentations
- Sustainable transport & mobility
- Accessibility for all easy going
- Potentials in telematics cooperation between Asia and Europe
- Future developments in aeronautics

Aim is to expand contacts and cooperation with Asian partners in the area of transport and mobility as well as to strengthen the internationality of science and economy in the region. Therefore the FAV has built-up alliances with Asian partners. These include the Japanese Institute for Transport Policy Studies (ITPS), the Hong kong University of Science and Technology, the Beijing Institute of Technology and the Tongji

University Shanghai.

Some examples for mutual benefit are:

 New technologies for efficient transport management, for instance "Car to infrastructure communication"

- Increased tansport safety with optimised ergonomics for all means of transport
- Systematic approaches to a sustainable increase of the energy efficiency for transport
  - New fuels and engines for im proved compatibility of trans port, including use of hydrogen in daily applications



We would like to welcome you at "Urban Transport & Mobility" and inContact:

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vite you to register for the event. See contact details above.



NEWS 
FAV

Applied Telematics - The Traffic Management Centre VMZ Berlin

The Berlin Traffic Management Centre VMZ is part of a public private partnership model which, until today, is unique in Europe: On the initiative of the Berlin Senate Department for Urban Development, a consortium consisting of DaimlerChrysler Services AG and Siemens AG was contracted in 2001 to im-

plement a central traffic management system for the German capital. Whilst the initial investment costs were financed by the State of Berlin, the VMZ assumed economic responsibility for the continued operation and future development of the traffic management system until 2010. Since January 1, 2006, Siemens AG is the only partner of the operating company. For this purpose, VMZ Berlin collects all the important data related to the current traffic situation in the greater area of Berlin. It is here that both static and dynamic data of public and private transport is processed and bundled to form an inter-modal information system. Through the exchange detectors along the motorways, we also collect our own data via 250 infrared sensors (Traffic Eye Universal – TEU) installed in the main street network of Berlin. Additionally, floating car data (FCD) from busses and taxis is included. This database forms the core of our system, enabling us to calculate and do-



cument the current traffic situation on Berlin's streets. The data is supplemented by visual impressions provided by 20 web cams and complemented by information on construction sites, major events in the city and the current weather situation.

In the Business to Administration (B2A) field, VMZ Berlin focuses on services for the public sector. We offer assistance to

It is through the combination of public and private transport data that VMZ Berlin creates an unparalleled database from which a broad range of collective and individual information and mobility services can be generated contributing to the maintenance and improvement of mobility. of information with our partners, the public transport operators Berliner Verkehrsbetriebe (BVG), S-Bahn Berlin GmbH and VBB Verkehrsverbund Berlin-Brandenburg, we have access to public transport data. Data on private transport is derived from two sources: Whilst using external data such as that gathered by the Traffic Control Centre from a network of 350 radar federal, regional and local authorities as well as public transport operators in all matters related to the maintenance of mobility.

We generate simulation models to assess the impact of traffic management measures and create scenarios of the development of traffic in the future. Integrated concepts for private, public and commercial transport, situation analyses, new concepts and substantiated recommendations for efficient traffic solutions as well as organisational and management methods provide important decision-making tools when it comes to setting the directions for maintaining mobility in the future.

Within the Business to Business (B2B) field, we develop individualized mobility services for passenger and commercial traffic based on current as well as forecast traffic situation data. Route planning and dispatching processes are optimized by integrating actual traffic data and calculated forecast data into logistics software.

In addition to the above outlined activities, VMZ Berlin also operates a comprehensive mobility portal for the Berlin-Brandenburg area. The website (www.vmzberlin.de) provides up-to-date mobility information such as maps on the current and forecast traffic situation, various dynamic routing services for private and public transport as well as information on traffic disturbances and construction sites in the road network.

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# FRAUNHOFER INSTITUTE FOR SOFTWARE AND SYSTEMS ENGINEERING ISST



Fraunhofer <sub>Institut</sub> Software- und Systemtechnik

Demand orientation and adaptability are of crucial importance in transportation information or more general mobility services in order to ensure the delivery of the right information at the right time and to the right place and person. The complexity of the problem of optimizing the information supply of a user – while simultaneously preventing

information overload – is further increased by its dynamic nature. The needs for information change with the situation of a user.

These issues are addressed by the area of information logistics, which is one major research theme of the Fraunhofer Institute for Software and Systems Engineering ISST. Within this theme the Location based Services department – headed by Prof. Agnès Voisard – focuses on methods and frameworks for situation-based information and service provision and their application in the area of transportation and mobility.

The basis is provided by the development of "situationalization" approaches (i.e., situation-based approaches to a dynamic personalization of mobile services) and the development of situation acquisition, anticipation, management, and provision technologies. This technology framework provides for integration and an integrated interpretation of data that comes from different heterogeneous sources like personal and environmental sensors, navigation systems, weather forecasts, or the user's personal digital organizer in an unified and consistent manner. On that basis ISST develops concepts (e.g., for situation-based navigation) that additionally take the expectations of the users, their habits, and their



familiarity with a certain situation (e.g., including their local knowledge or their familiarity with the use of certain public transportation means) into account.

The research results are applied in projects ISST is carrying out with partners from research and industry. One of these projects is TRANSIT (www.transit4events.org) where ISST developed transportation related information services such as intermodal door-to-door navigation and orientation services for visitors in the context of large-scale distributed events, and tested them during the FIFA World championship 2006 in Berlin. The user-centered personalization and demand-orientation concepts developed at ISST were reflected in the functionality and user interfaces of the services. The navigation service for users of public transportation and pedestrians, for instance, uses picture sequences to guide a user (e.g., a foreign guest) to the nearest tram station or show the way on the »last mile«, that is, the way to the stadium entrance or the user's seat. The tests showed that this technology is best used in dedicated areas such as event areas, airports, and so on, and can also be applied indoors.

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infrastructure operators.

New techniques & methods are requested to move increasing numbers of

vehicles (~+50% by 2015) safe, efficient & environmentally sustainable through the existing road network.

Co-operative systems enabled by enhanced telematics (vehicles & infrastructure) allow to handle dense traffic safe & efficient. Complementing

Complementing the running research for in-vehicle technology & vehicle to vehicle communication (V2V) innovative solutions for com-



infrastructure by more efficient infrastructure to vehicle communication.

> The proposed approach will allow the infrastructure operator to react in real time on the varying traffic demand and traffic situation.

> To realize the project goals of COOPERS there are working 36 european research and industry partners and infrastructure operators.

> The role of the FAV is the management of dissemination and the co-ordina-

munication between infrastructure & vehicles (I2V) have to be established to explore these options targeting a better use of the

available infrastructure capacity.

The integrated European R&D project COOPERS focuses on the development of innovative telematics applications on the road infrastructure with the long term goal of a "cooperative traffic management" between vehicle and infrastructure, to reduce the self-opening gap of the development of telematics applications between car industry and The role of the road operator will change and has to be redefined in terms of his obligation for precise, reliable & real time information & liability. Allowing authorities to adjust their investments in road infrastructure safety with the advances in vehicle safety, minimizing redundancy of investments.

Cooperative road infrastructure systems will result in multifunctional solutions that require less investment than autonomous systems.

COOPERS will support the demand to handle more vehicles in the given

tion of the Berlin demonstration in the second quarter of 2008.

# UPCOMING EVENTS

**10.9-23.09.2007** Asia -Pacific Weeks Berlin - www.apwberlin.com

**29.11-30.11.2007** Integration Conference EURNEX www.eurnex.net

# TSB GmbH/FAV Berlin Transport Technology Systems Network

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