HOW TO REACH US

Go to www.ivi.fraunhofer.de for complete directions.

For further information feel free to contact us.

Public Relations
Elke Sähn
Phone +49 351 4640-612 | presse@ivi.fraunhofer.de
Finding your way within transport networks of large cities, choosing individual means of transport, changing or leaving the vehicle at any stop and reliably reaching your destination can be really easy – just let your own smartphone guide you! No matter if a change of vehicles is needed, the route is interrupted or modified – the mobile companion always finds the fastest way to your desired destination.

In many regions all over Europe, a lot of well designed applications for mobile devices, usually providing public transport schedule and connection information, are already available. Although occasionally a map with a visualization of the designated route enriched with some additional routing information has been integrated, these are, however, no turn-by-turn navigation applications as they are known from common road traffic systems. »SMART-WAY« bridges this gap.

»SMART-WAY« is a turn-by-turn public transport navigation, developed by eight partners from five European countries in a joint project. It was demonstrated in two European cities and has been implemented in practice in the city of Dresden.

Tomorrow’s public transport travel – featuring reliable guidance to the destination at a maximum degree of freedom for the passenger – with »SMART-WAY«, it’s as easy as driving a car today. Current research work is directed towards the development of an intermodal solution.

Starting the navigation, the first step is to find an adequate route, which can be done before departure or after boarding a vehicle. The user can enter the starting point of the trip and the destination, or use the current location to calculate a route. The navigation process is initiated aboard the vehicle. If the customer has not reached the departure station, the smartphone will show the remaining time until departure as well as the way to the station. All following stations will be announced during the trip. In addition, important points along the route, such as interchanges or exit stops, are signaled by vibration of the smartphone.

A notable innovation is the unrestricted freedom for customers, as the navigation adapts to any detours they might want to take. If the user decides to get off the bus and have a coffee or whether he opts for using other vehicles or misses a change, the application detects the deviations from the original route and calculates a new one. Passengers are guided to the destination – assisted by maps, if requested.

The connection to an appropriate real time scheduling system of the transport operator implicates the availability of up-to-date information on delays or early arrivals to improve the navigation. For instance, interchanges which are not scheduled but incidentally result from the current network status can be used to enhance or speed up the journey. Analogous to car-navigation systems, the customer always receives the fastest route to the destination.

Mobile Application
The navigation software is designed for the passenger’s smartphone, which should be GPS-ready and use an adequate data tariff. In the project, »SMART-WAY« is being developed for Android, but the use on other mobile platforms is also intended in the future.

Host Services and Interfaces
To accompany passengers continuously when using a public transport navigation, a host server providing various data of the transport network must be available as well as an interface to a connection information system based on real time data. To ensure the protection of the customer’s privacy, all actual localization and navigational processes are exclusively running on the smartphone. Thereby, up-to-date and individually processed real time traffic data are taken into consideration.

Management Application
Besides system administration and maintenance of the public transport network, the management application offers the transport operator the opportunity to insert and manage network disturbances in a simple way. This information can easily be passed on to the customer’s smartphone via »SMART-WAY«. To navigate passengers around disturbances within the public transport network, the messages are also included into route finding algorithms.

The Fraunhofer IVI has expertise and experience in the areas of
- traffic information systems,
- identification of traffic situations,
- traffic management and
- ticketing.

These topics have been successfully implemented in several projects, such as
- »intermobil«: intermodal system for traffic information and control,
- »CLOSER«: Connecting long and short distance networks for efficient transport,
- »MOSAIQUE«: innovative traffic management,
- »HandyTicket Deutschland«: mobile ticketing.

Further information
www.smart-way.mobi

Contact
Sebastian Pretzsch
Fraunhofer IVI | Germany | Phone: +49 351 4640-689
info@smart-way.mobi