Train windows as new display surfaces

SmartMMI technology makes intelligent data directly available to passengers in public transport

With SmartMMI, public transport passengers can be provided up-to-date information about developments in their ongoing journeys – directly on their adjacent train window. This is made possible with SmartWindows, an intelligent data integration system using situational filtering and context-based visualization of information.

For the past year and a half, five partners from industry and research have been working on the project, which is funded by the research initiative mFund of the German Federal Ministry for Transport and Digital Infrastructure. The aim is to provide passengers with comprehensive up-to-date information (also in the event of delays or changes) throughout the mobility chain. Passengers also can access information about the route they are taking or touristic destinations along the way through the SmartWindows. "*Each journey should become a mobility experience*," says Bettina Langensiepen of the HÜBNER Group.

HÜBNER is making it possible for the transparent displays to be installed in public transport vehicles. The company is providing materials such as the insulated glass panes, the surrounding frames and covering as well as gluing and assembling the components for test rig trials in accordance with UIC standards.

For the intelligent integration of relevant data, its semantic evaluation and dynamic utilization, the project partners have developed new technologies making use of augmented reality and interactive exploration modalities. Also in use are big data and small data technologies, as well as open data sources and third-party data providers. Data protection and security has been a concern throughout the development process.

The current situation of passengers is handled through context information that allows the system to select data tailored to the particular situation while displaying personal information on users' smartphones and general supplementary information on the transparent SmartWindow of the vehicle. "*With the use of color concepts, for example, it is then possible for connections between the passenger's personal route and other general information to be made*," explains Langensiepen.

More information: https://smartmmi.de/

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As a global system supplier for the mobility industry, for manufacturing and for life sciences and research applications, the HÜBNER Group is the worldwide leader in gangway systems for buses and railway vehicles (**Mobility**), a well-recognized specialist for sophisticated elastomer solutions and products, insulation and composite materials (**Material Solutions**), as well as a supplier for applications in the field of laser, terahertz and high frequency technologies **(Photonics)**. The HÜBNER Group employs more than 3,500 persons worldwide. In addition to the headquarters in Kassel, Germany, HÜBNER has established more than 30 locations around the world over the preceding years.

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