Mobile perspective in regional public transportation

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At the IFA Consumer Electronics Unlimited trade show in Berlin from August 31 - September 5, developers from Fraunhofer's FOKUS will exhibit how to link information to mobile devices and to public displays. The goal is to make the use of public regional transit more convenient and more appealing.

Did we miss it, or is it just delayed again, that bus? How often have you had to ask yourself the same thing, incredulously, while waiting for your bus. In a project with the VBB, developers at the Fraunhofer Institute for Open Communication Systems FOKUS are processing data on the latest traffic flow via the VBB's programming interface, so that they can report to passengers – resident and tourist alike – not only the current location of the bus or streetcar, but also alternative routes, or even if it would be cheaper to transfer to a car-share or bike-share program, and if interesting sights or events are nearby.

"With the scenario on display at IFA, we intend to exhibit the potential that is available if traffic and transit information are intelligently intertwined," explains Robert Kleinfeld of FOKUS. "That's why we developed software that takes data from the display sign at a stop – like the route schedule, for instance – and can simply transmit it to a smartphone, so you can take it with you."

Transferring data from the bus stop display directly to the smartphone

One example might look like this: The passenger plans his route from his current location, Berlin's Brandenburg Gate, straight through the city to Kastanienallee in Prenzlauer Berg, a nightlife district. He can put the routing together at the bus stop display. It is automatically converted into a QR code that he is able to scan using his smartphone. That way, he has the connection data for his route through the city directly on his cellphone. When he passes by a sight, he obtains the corresponding information about it. This also tells him about nearby restaurants or current events that lay directly on his route. If the passenger is a Berlin resident, then he can request different information, such as locations of vehicles in a car-share or bike-share program, which are displayed for him on a city map. The user selects "tourist" or "resident" at the beginning of the route planning process on the public screen.

In both cases, plans call for displaying real-time data about buses or trains, their current location, the scheduled arrival time, as well as any delays in the transit network. Then the system would offer recommendations on alternative routes.

The developers at FOKUS are using VBB's data to provide an exemplary demonstration of this scenario. They converted these data into the GTFS (General Transit Feed Specification) format. This standard is there to establish and enable the connection of services that access real-time transit data. The multiscreen solution is one example that will be presented at IFA. Visitors can plan a route at a bus stop in the exhibition booth (Hall 11.1, Booth 10) using the public display screens, scan them with their smartphones – provided they have the corresponding app uploaded onto their device – and then take the connection data with them on their trip.

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