Towards a Personalized and Distributed In-car Infotainment Experience Using the Open and Web-based Webinos Middleware

Abstract:
Emerging cloud services provide users the device- and location agnostic access to their applications and personal data. With growing customer demand for personalized in-vehicle infotainment (IVI) the seamless access to personal data will play a crucial role in the success of upcoming IVI-systems. A seamless access, however, is tied to specific consumer electronic (CE)-device ecosystems and requires the storage of personal data in the backend infrastructure of the chosen ecosystem. An open and user-controlled middleware is missing. This paper present the webinos middleware for enabling the execution of applications across heterogeneous devices such as IVI-systems, smartphones, tablets, PCs and home media centers. By avoiding the storage of personal data in the backend infrastructure, users stay in control over their personal data. We evaluate the feasibility of our approach in respect for in-car scenarios with a prototype implementation of a browser-based Point-of-Interests manager on top of the webinos middleware. The application runs on three different device types - pc, smartphone/tablet and IVI-system.

Stichworte: HTML5, browser, in-vehicle infotainment system, middleware, ubiquitous computing

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