Concept of a Reference Architecture for an Extendable In-vehicle Adaptive Recommendation Service

An adaptive recommendation service can reduce driver distraction through reducing the amount of operation steps needed to call a function. It learns the routine user behavior of the driver related to a situation and supports the driver with this knowledge by giving proactive recommendations for preconfigured functions. An adaptive recommendation service is a complex system and the development includes several challenges. One is the development of an architecture which needs to be modular, extendible in regard to the support of different functions and integrated in an overall in-vehicle HMI architecture. This architecture describes the components and interfaces of an adaptive recommendation service which need to be researched and developed. It is a starting point for the implementation of realistic prototypes in a real vehicle or driving simulator which enables an extensive evaluation of the whole adaptive recommendation service.