SFB 378 - Fortsetzungsantrag (4. F rderperiode: 2005, 06, 07) zu
EM 5 READY: Lernen, Modellierung und Entscheidung f r situierte Interaktion

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EM 5 RENA: REssourcenadaptive NAvigation (Resource-adaptive Navigation)

Antragsteller: Wolfgang Wahlster (INFORMATIK)

In the project RENA, we will transfer our results from our previous research on resource adaptive navigation systems to a precompetitive industrial consortium, with the aim of developing a prototypical industrial resource adaptive navigation system for outdoor and indoor applications. As industrial partners the cooperation will include BMW AG as a mobility company, T-Mobile AG as a wireless carrier and Eyeled GmbH as a SME and spin-off company. Within this project, we will intensify our cooperation with the research group of ***Prof.Lindenberger***, formerly known as the project ***ARC (EM4)***, and we will concentrate on the following questions.

Future research questions concerning the project RENA:

- What software architecture can support the seamless navigation of a mobile person in a car, while walking in a city, in a shopping mall, and in an office building, so that the same mobile navigation companion supports the user in various outdoor and indoor situations?

- How can various positioning technologies (active and passive technologies) based on GPS, cellular systems (GSM, UMTS) and wireless networks (WLAN, Bluetooth) and beacons (e.g. infrared) be combined in a resource-adaptive way, so that an ABP (Always Best Positioned) system can be realized?

- What infrastructure is needed to support adaptive navigation in large shopping malls and office buildings, and how can it be used to tailor the navigation information to different user groups (young people vs. elderly people, healthy people vs. handicapped people)?

- How can multimodal input be used for resource-adaptive interaction with the navigation companion in different mobile application scenarios, and how can the above mentioned usability engineering questions be researched in various realistic field studies?

Number of staff members: 2 BAT II A
Number of student researchers: 2 SHK - 19 hours per week