Informatik-Kolloquium

Der Fachbereich Informatik der Johannes Kepler Universität Linz[1] lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

Prof. Matthias Kranz

Universität Passau

Experimental Evaluation of User Interfaces for Visual Indoor Navigation

Freitag, 24. April 2015, 12:00 Uhr

Raum: JKU, MT127, Science Park

Abstract:

Mobile location recognition by capturing images of the environment (visual localization) is a promising technique for indoor navigation in arbitrary sur-roundings. However, it has barely been investigated so far how the user in-terface (UI) can cope with the challenges of the vision-based localization technique, such as varying quality of the query images. We implemented a novel UI for visual localization, consisting of Virtual Reality (VR) and Aug-mented Reality (AR) views that actively communicate and ensure localiza-tion accuracy. If necessary, the system encourages the user to point the smartphone at distinctive regions to improve localization quality. We evaluated the UI in an experimental navigation task with a prototype, informed by initial evaluation results using design mockups. We found that VR can con-tribute to efficient and effective indoor navigation even at unreliable location and orientation accuracy. In this talk I will talk about identified challenges and share lessons learned as recommendations for future work.

Short Bio:

Professor Matthias Kranz is a full chaired professor and heads the "Lehrstuhl für Informatik mit Schwerpunkt Eingebettete Systeme" (Institute for Embed-ded Systems") at Universität Passau, Germany. He studied computer sci-ence at Technische Universität München and completed his Ph.D. research at Ludwig-Maximilians-Universität, München. After some years in industry at German Aerospace Center, he returned to academia. After several prior ap-pointments, he accepted the position in Passau in March 2013. He re-searches at the intersection of Embedded Systems and Human-Computer Interaction. The main goal of embedded interaction is to look at new oppor-tunities that arise from embedded systems for interactive systems and the immediate value users gain. He researches on methods, tools and applica-tions of networked embedded systems and novel forms of human-computer interaction with these systems. Application areas of his research are user in-

[1] Der Fachbereich (http://informatik.jku.at) besteht aus folgenden Instituten:
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terfaces in general, novel forms of human-computer interaction, mobile and embedded systems, automotive user interfaces, and applications for the In-ternet of Things.

Priv.-Doz. Dr. Andreas Riener
Institute for Pervasive Computing

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