Czech Technical University in Prague
Faculty of Electrical Engineering

Department of Computer Science

DIPLOMA THESIS ASSIGNMENT

Student: **Bc. Michal Švácha**

Study programme: Open Informatics
Specialisation: Software Engineering

Title of Diploma Thesis: **Semantic Data Analysis and Visualization of User Interactions**

Guidelines:

Perform the state-of-the-art analysis of current activity trackers, that are used for lean/agile product development to measure the product performance against various metrics of collected user data (like time spent on particular screen). Focus on relations of domain design and low-level user data in tracker reports, including role of semantics. Moreover, investigate possibilities of multiplatform data collection.
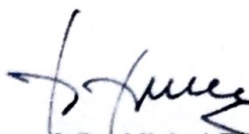Based on this analysis, propose design of analytical system that will allow management and semantic alignment of collected user data with the product domain vocabularies. Propose design of task templates and automatic data alignment . Finally, develop hi-fi prototype of the proposed analytical system in the form of web application collecting data from sample mobile application. Evaluate both data processing and data presentation in system and user tests with at least 5 users.

Bibliography/Sources:

Julie A. Jacko: Human Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications, Third Edition, CRC Press, 2012
Daniel Waisberg, Google Analytics Integrations, John Wiley & Sons, 2015

Diploma Thesis Supervisor: Ing. Ivo Malý, Ph.D.

Valid until the end of the summer semester of academic year 2016/2017

prof. Dr. Michal Pěchouček, MSC.
Head of Department

L.S.

prof. Ing. Pavel Ripka, CSc.
Dean

Prague, February 9, 2016