

IST-061
Novel Design and Information Management Infrastructure

Asim Smailagic

Research Professor, Institute for Complex Engineered Systems, Director of Laboratory for Interactive Computer Systems and Wearable Computers, Carnegie Mellon University, Pittsburgh, PA

Daniel Siewiorek

Director Human-Computer Interaction Institute, Buhl University Professor of Electrical and Computer Engineering and Computer Science, Carnegie Mellon University, Pittsburgh, PA

Marvin Sirbu

Professor, Departments of Engineering and Public Policy, Industrial Administration, and Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA

Industry Participants

James Beck

Inmedius, Pittsburgh, PA

Ivo Stivoric

BodyMedia Inc., Pittsburgh, PA

Tom Kerr

Vocollect, Pittsburgh, PA

Abstract

The primary goal of this project is to work on providing building blocks for a smart infrastructure and tools that move towards giving nearly human-level assistance to design personnel. This assistance will range from task support to fully-delegated tasks appropriate to an intelligent trusted assistant. We expect to achieve improvements throughout the research period, such as an increase in efficiency of human operation for assisted tasks.

We will target innovative tools that contribute to the efficiency of mobile workers. We will work towards developing adaptive agent architectures that allow the system to learn from experience and improve performance over time as a result of use. Moreover, as an environment changes (e.g., when a user moves from the workplace design environment to the home), the system will reconfigure, minimizing user distraction and work disruption.