

Schramm, Dr. Ulrich

Professor of Architecture, University of Applied Sciences, Bielefeld, Germany

“Acceptance of Intelligent Building Technologies: Does the user get what he wants?”

At EDRA 45 in New Orleans, the author presented the framework of his multi-disciplinary research project ‘Well-being and Acceptance in the Intelligent Building’, funded through the State Ministry of Innovation, Science and Research, North Rhine-Westphalia, Germany.

The research project is based on several studies that indicate an increasing use of building automation systems in new houses currently and in the near future as well, while other sources – at the same time – list a couple of factors that continue to limit the acceptance of smart home technology by occupants. Therefore the focus of this study is on the building user, his needs, worries, and concerns throughout the lifecycle of the building. Important questions are:

1. Which technologies decrease well-being?
2. What are the barriers for acceptance?
3. What is the role of occupants’ general technological affinity?
4. What is the impact of participatory planning processes?
5. Which measures will increase well-being and acceptance?

In order to find answers to those questions, a team of professors, assistants, and master students from the disciplines of architecture, psychology, and informatics started to implement the research project. The presentation shares first insights from the following steps:

- Review of related research activities in Germany
- Post-Occupancy Evaluation (POE) of a new intelligent research building (Cognitive Interaction Technology Center of Excellence, CITEC), Bielefeld Campus
- Analysis of the building delivery process for the demonstration and research facility ‘Intelligent Building Technologies’, Minden Campus
- Related longitudinal surveys (panel data) and cross-sectional studies with students (expectations, attitudes, need to participate)
- Behavioral studies on intelligent building technologies with students in the Psychological Laboratory, Bielefeld Campus
- Proto-type testing of micro-curricula applications via smart phones.

Keywords:

Intelligent Building Technology; Smart Home; Building Performance Evaluation; Post-Occupancy Evaluation; Multi-disciplinarity; Participatory Planning.

Contact Info:

Dr. Ulrich Schramm
Artilleriestrasse 9, 32427 Minden, Germany
Phone: + 49-571-8385-179
Fax: + 49-571-8385-250
E-Mail: ulrich.schramm@fh-bielefeld.de