

RESEARCH STATEMENT

"Interconnections in mobile systems - an engineering substantiation"

Mario Kupries
Mario.Kupries@zu.ac.ae
Zayed University, United Arab Emirates

Latest mobile systems provide new approaches to interactions, take-over and execution of tasks. With their characteristic features, such as interoperability, openness, etc., they make great demands on analysis, modeling and development and at the same time open up new fields of application. Here it becomes obvious that the practical application of information technology is ahead of its engineering substantiation.

The relations and dependencies between building blocks in mobile systems are a peculiarity. They have to be complex, variant and negotiable. Over the last years of research and practical work, special technologies for interactions have been identified, abstracted, modeled, prefabricated and developed as explicit building blocks in information systems, eg. as software bus, communication channels, interconnectors. The article will shed light into

- the various technologies of component interconnections
- application semantics and techniques of interconnections
- building block technology for complex, flexible and volatile interconnections
- single and complex interconnections building blocks
- dynamic assignment of interconnectors to components
- mapping of interconnections building blocks onto architectures of mobile systems
- platform services for dynamic interconnections

The benefit consists in elucidating the demands on interconnections, the analysis and modeling of classes of building blocks for interconnections and their matching assignment to special components. Analyses of interactions in information systems are of great importance and have a high impact on practical works.