Coordinating Smart Distributed Systems

Viktória Zsók[a]

[a]Eötvös Loránd University
Faculty of Informatics
Department of Programming Languages and Compilers
H-1117 Budapest, Pázmány Péter sétány 1/C
zsv@inf.elte.hu

Abstract

High level coordination of distributed, cyber components is essential for assuring efficient collaboration between constituent elements. Smart systems can be modeled and implemented using task-oriented management and workflow tools based on functional languages. Functional languages proved to be suitable and accurate for prototypes of cyber and distributed systems [2].

The SmartHouse project introduces a complex model of collaborative components and events of a smarthouse. Modeling such a smart system requires comprehensive specification of sophisticated interdependencies between events and events' triggers, settings, signals, data and taskflows [1].

The system model enables the definition and integration of components of a smart system software components: tools such as pooling events, signal processing, dataflow management, communication channels, taskflow and web based services. In these special distributed systems models physical world elements are simulated, programmed, and tested with functionalities defined in an interactive way according to the users' preferences.

Keywords: distributed and functional programming, smart systems

MSC: C.2.4.

References

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