Dialogue Specification in a Service-Oriented Architecture

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In Software Engineering there has always been to strands of work to reduce development costs, i.e., executable specification and reusable components. We are interested in the domain of enterprise applications. In this domain the issue of executable specification is currently addressed by business process management initiatives, the issue of reusable components is currently addressed by service-oriented architecture. But there are tensions between the two paradigms: how to exploit the promises of service-oriented architecture in a workflow-intensive information system scenario? How to implement workflow logic in a service-oriented manner?

In this talk we start to discuss these and similar questions by introducing a semantic viewpoint of enterprise applications. First, we define dialogues of submit/response-style systems as typed bipartite state machines. Then, we introduce the notion of a layered data model consisting of an information model for session data and a message model for the application interface. We introduce the notion of a purely message-based form-based system and explain how this notion relates to the layered data model approach. The findings are discussed with respect to current efforts in service-oriented architecture.