ISE Workbench: Integrated Service Engineering *

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Integrated Service Engineering (ISE) Workbench supports an interdisciplinary structured service engineering process to develop services that can be traded over the Internet. It provides one platform for four *distinct* roles: Business strategist, business architect, IT analyst, and IT developer. Furthermore, the workbench offers tools to model five distinct service aspects: business processes, data, business rules, people, and service description. Service design utilizes Business Process Modeling and its notations such as BPMN and UML, whereas service implementation relies on web service standards including BPEL and WSDL. The tool follows OMG's Model Driven Architecture (MDA) to bridge the gap between business and IT.

ISE Workbench builds on Eclipse's Rich Client Platform (RCP), which allows an integration of existing tools as well as offers a platform for novel tool development. The tool embodies a total number of 20 editors in order to model the five service aspects for each of the four roles. OMG's Query View Transformation (QVT) specification is the basis for model transformation implementation, e.g. BPMN to BPEL.

The demonstration shows how a real-world process is designed and implemented with the ISE Workbench. The process involves three different participants, a complex workflow with two sub-processes, and five data entities. Firstly, the demonstration addresses the business strategist using several mind map-like editors to scope information for each of the five service aspects. Following this, the business architect generates UML diagram skeletons and eventually adds further information and details business processes and data entities. This concludes the design phase and starts the implementation phase. For each UML diagram, the IT analyst generates formal models including BPMN and OWL. The IT analyst completes these diagrams with formal information including message exchange. Lastly, the workbench transforms these models into interpretable languages such as BPEL and WSDL.

The demonstration addresses academics and practitioners likewise. Academics benefit from the incorporation of state-of-the-art design notations and implementation languages, such as BPMN, BPEL, and WSDL, as well as the successful application of MDA. Practitioners on the other hand, benefit from the presentation of intermediate results from the national funded research project Theseus/TEXO and the presentation of a real-world use case.