MODELBUS® ADAPTER:
SPARX ENTERPRISE ARCHITECT

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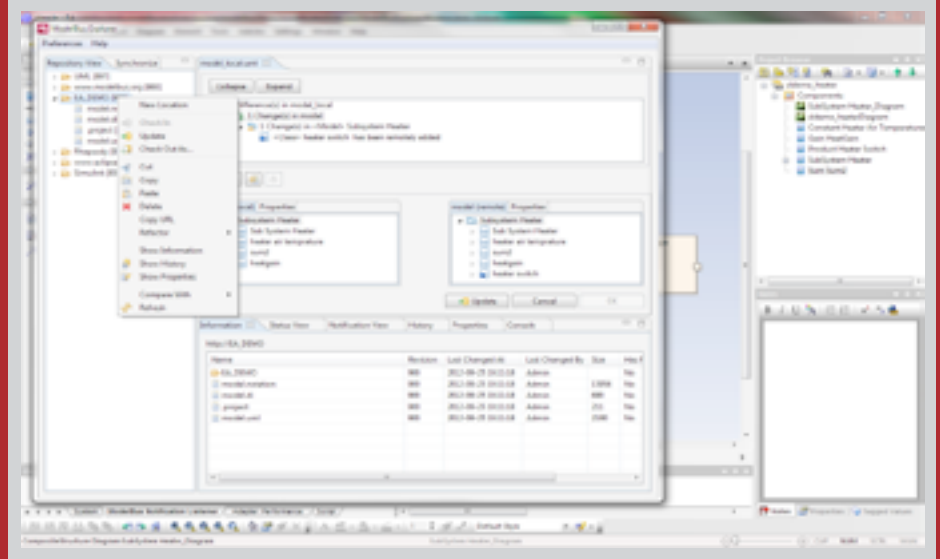www.fokus.fraunhofer.de/en/sqc
www.modelbus.org

Software development is becoming more and more complex and has to meet increasing demands for time to market, saving of resources and product quality. The number of tools which are used for the development comprise traditional well known vendor tools, open source tools as well as customized and in-house tools. Each tool serves a particular purpose and may be highly specialized for accomplishing certain tasks.

The important challenge in such complex development environments is the exchange of data. An easy exchange of data between the tools also minimizes the vendor-lock in effect. Companies need to be able to easily switch between different tools with different strengths and capabilities. The automation of small and repetitive tasks within a development process is another challenge. These tasks, e.g. the automatic execution of quality checks or the documentation of changes performed, are important for the efficient creation of high quality products.

ModelBus® – Tool Integration and Automation

With ModelBus®, Fraunhofer FOKUS offers a model-driven tool integration framework which supports the integration of heterogeneous development and engineering tools as well as the automation of error-prone and tedious tasks. The engineer's activities automatically trigger subsequent actions, like model transformation, code generation and quality checks, so the exchange of data in distributed teams with their respective tools is ensured. That way, ModelBus® can substantially increase the productivity of creating complex software-based systems. Each tool is connected to ModelBus® via a specific ModelBus® Adapter and can optionally act as a service by providing its functionality to other tools.

*Sparx Enterprise Architect
with ModelBus® Adapter*

An adapter typically bridges between a tool's internal representation of data and a tool's external format, which is then the basis for further processing. Model-Bus® Adapters utilize the capabilities of the respective tools for a seamless integration into the tool workflow and for an unconstraint user experience.

ModelBus® Adapter for Sparx Enterprise Architect

Besides textual and graphical domain specific languages, the Unified Modeling Language (UML) and its profiles play an important role through the complete development lifecycle. This importance is further rooted in the availablity of affordable, customizable and high quality UML tools. The Sparx Enterprise Architect is a well-known UML tool used in various domains. The ModelBus® Adapter for Sparx Enterprise Architect connects this tool to other UML tools or to a complete ModelBus®-based engineering process and is capable of importing and exporting UML models. This way the tool can be used to edit UML models in Enterprise Architect which might be created by other UML tools or which are the result of a model transformation. The adapter supports the simultaneous work on UML models by providing specific dialogs for identifying changes and potential conflicts. Thus, developers can keep track of the changes applied to the model, either by team members or by themselves. Additionally, the adapter also supports all UML diagrams offered by Sparx Enterprise Architect and exports them to or imports them from the Eclipse MDT Papyrus format, so graphical information captured in the diagrams will be preserved.

Application and Benefits

Overall, the ModelBus® Adapter for Sparx Enterprise enables the seamless exchange of UML models with ohter tools. As a result, there is no need to bridge between the Sparx Enterprise Architect and existing XMI dialects or tool proprietary formats supported by other tools anymore. At the same time, it offers great opportunities for the automation of development processes benefiting from the ModelBus® tool integration framework. Thus, an automatic processing like code generation or model transformation can be performed additionally. A complete tool environment chaining various different tools together can be created with the help of the other available ModelBus® tool adapters and by creating new ones, e.g. for in-house tools. The ModelBus® Adapter for Sparx Enterprise Architect offers great user experience as it performs very fast imports and exports of models and comes with custommade user interface extensions for iterating on changes in the model and for presenting ModelBus® notifications.

Features

– High-Performance Model Exchange
– MDT Papyrus and EMF/UML compatible
– Including Visual Import/Export of Diagrams

Selection of Available Adapters

Tools:

– Eclipse: Topcased, Papyrus etc.
– IBM: DOORS, RSA Rhapsody
– Sparx Enterprise Architect
– Matlab: Simulink
– Microsoft: Office, Visio
– TRAC

Services:

– Transformation: ATL, QVT etc.
– Verification: OCL, Metrino etc.
– Testing: FOKUS!MBT etc.
– Code and document generation: MOF-script, M2T etc.
– Traceability: Traceino

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