Workflows under Control

SYSTEM DESCRIPTION

KiWorkflow

The complete solution to model, execute, control and manage your business processes.

KiWorkflow Features:

- Cross-platform support of business process execution
- Easy modeling of your business processes using a graphical editor (see Fig. 2)
- Based on XML descriptions
- Multi-language capabilities
- Multi-domain support
- Flexible concept for user authentication and authorization
- Management of work items for your staff
- Control of automated processes
- Open and standardized communications interfaces (SOAP [1], RMI)
- Supports multiple client-platforms, e.g. Java, Web, .NET, C++
- Extendable through plugins
- Based on the standards of the Workflow Management Coalition (WfMC) [2]

KiWorkflow Components

The individual components of KiWorkflow have been specified and implemented according to the workflow reference model from WfMC [2] (see Fig. 1):

- The **Workflow Enactment Service** with its embedded **Workflow Engine**: This is the core of the system which starts, monitors, manages and terminates all workflow processes. All workflow process steps are logged in a data base for monitoring and administration purposes.
- **Process Definition Tools**: The Workflow Designer is used to graphically define the workflows. Based on extended activity diagrams, workflow process definitions are generated. The workflow process definitions are passed on to the Workflow Enactment Service as XML documents.
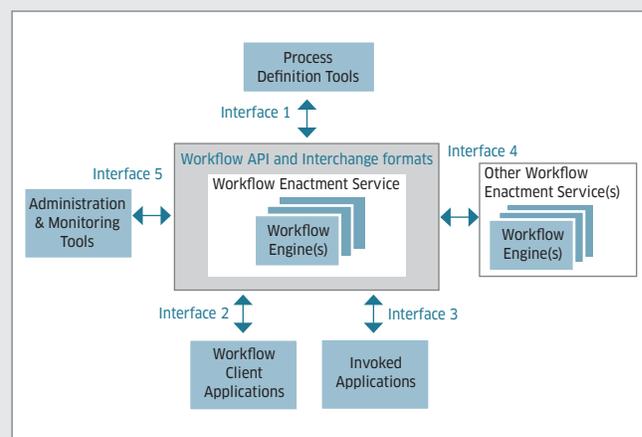

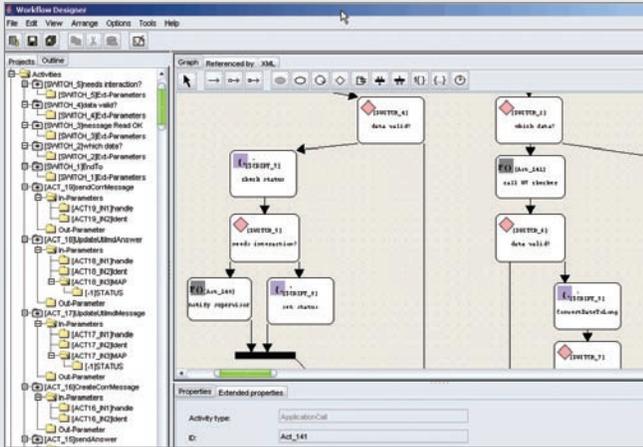Fig. 1: Workflow Management Coalition Reference Model

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Fig. 2: Workflow Designer

■ **Invoked Applications:**
External applications and processes can be called directly from the workflow system through a SOAP interface. Other communication mechanisms can be added through plug-in technology

■ **External Workflow Systems:**
3rd party solutions can be integrated with KiWorkflow using a standardized interface.

Communication

The communication between the components of the workflow system is realized via SOAP function calls.

The usage of SOAP offers an open, multi-server cross-platform communication of all processes and components involved in the workflow execution.

■ **Administration and Monitoring Tools:**
A browser-based administration interface allows you to administer the workflow system and monitor the execution of workflows in the system (see pic. 4).

■ **Workflow Client Applications:**
External applications can connect to the workflow system via the Workflow-API (WAPI). For example, these applications can display the work items distributed by the workflow system in form of user-specific work item lists. Based on these lists, users are able to manage the execution of their individual tasks as part of complex workflows (see Fig. 3).
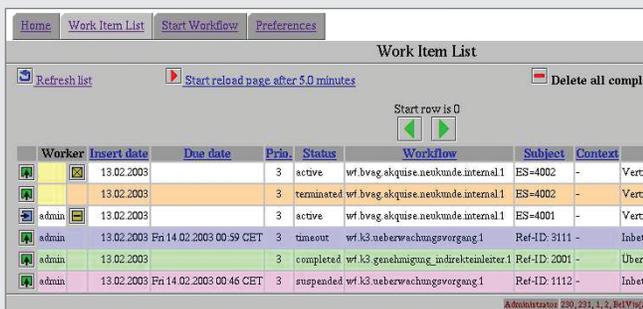

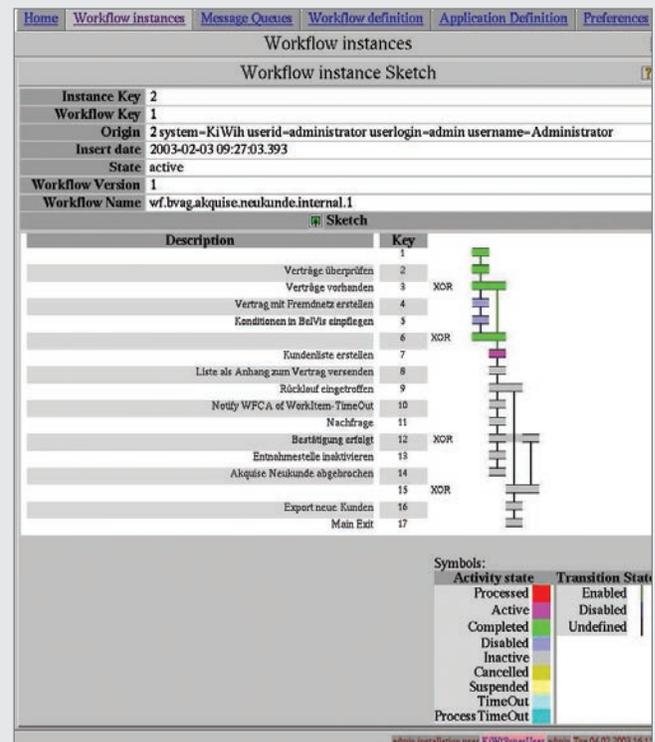Fig. 3: KiWorkflow WorkItemhandler (KiWih)

Fig. 4: KiWorkflow Administrator (KiWfAdmin)

[1] SOAP (Simple Object Access Protocol) is a protocol for information exchange in a decentralized, distributed environment. The SOAP protocol is based on XML.
[2] The Workflow Management Coalition is an international organization of end users, analysts, academia and almost all major software companies. The objective of WfMC is the establishment of standards for workflow systems in terms of terminology, interoperability and connectivity of different workflow products.

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