

Enterprise Application Integration: Introduction to the Minitrack

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Enterprises are lining up into virtual alliances to remain competitive in the ever globalizing markets. Virtual enterprises constitute temporary, location-independent consortia aimed towards a shared goal. These networked organizations do not only integrate their value chain to increase the customer-perceived added-value, but also typically share their resources in a more efficient way than before. This new paradigm of doing business demands integration of existing legacy systems, packaged software (ERP systems) and newly developed component based enterprise systems. Integration of these various technologies is far from trivial. Organizations attempting to integrate their systems across the value chain are facing complex issues such as: integrating enterprise models, semantic interoperability, definition of interfaces and interchange standards, wrapping legacy system components, and, implementing secure and reliable distributed transactions in such highly distributed and hybrid component-based environments.

Recently, various methodologies, architectures and technologies that have emerged to address these requirements. These include: (extensions of) XML, middleware standards (COM+, CORBA,..), message broker architectures (MQSeries), workflow products, business object technology, reference-models and blueprinting, tools for enterprise modelling (DEM, Workflow, ARIS,..) wrapper technologies, interface standards (IDL, CDL, EPR BAPI's, Microsoft Biztalk, OFX,...), standard modelling languages (UML) and model interchange formats (XMI) programming languages for distributed systems (Java).

This minitrack presents seven excellent papers that address and challenge the wide range of research topics and solutions within the field of enterprise application integration such as presented in the above.

The first paper by Ralf Reussner is entitled "Enhanced Component Interfaces to Support Dynamic Adaption and Extension". This paper presents a new interface model

for software components that not only specifies static information, but also semantic applicability information to ensure non-conflicting run-time behavior and to facilitate component adaption.

The second paper, by Niels Christian Jul, compares two E-Commerce servers, IBM's NetCommerce and Microsoft's Site Server Commerce on the basis of a business-to-business case study. It focuses on the integration of the servers with the installed back-end (ERP) servers.

The paper of Marinos Themistocleous et al. deals with an empirical survey to identify and analyse problems that companies face to integrate Enterprise Resource Planning (ERP) packages with other ERP and legacy systems.

The next paper, from Martin Lippert et al. analyses a multichannel approach for companies to address customers via various channels. Therefore, the authors introduce domain services to concentrate business logic and encapsulate legacy system software.

Thomas Puschmann and Rainer Alt describe in their paper a sophisticated case study at the the Robert Bosch Group to articulate the need for an integrated architecture for ERP, supply chain management (SCM), Customer Relationship Management (CRM) and Electronic Commerce (EC) systems.

The following paper, takes a more technical perspective, and concentrates on a solution for the problematic transfer of data among ODMG data stores. Their proposed solution can be employed to integrated ODMG databases as their framework supports exporting metadata from export schemata to a federated kernel.

Lastly, Manfred Jeusfeld and Aldo de Moor, present an social-norm based, co-development approach to create a common set of concepts, that can be used as a foundation of enterprise application integration, and is based on product and company ontologies represented in industry-specific reference models.