

Bavarian research & innovation



Bavarian Research Cooperation Information Systems

FLEXIBLE COUPLING OF IT SYSTEMS IN E-BUSINESS

Efficient handling of internal and external company processes in an electronic business (e-business) environment, e.g. when an order has to be processed or a complaint dealt with, requires heterogeneous IT systems used by the partners involved to be linked rapidly and adaptably. Problems that occur in this context, such as uniform product classification, security questions or technical principles, can be many and varied.



In the Bavarian Research Cooperation for Information Systems (Bayerischer Forschungsverbund Wirtschaftsinformatik), FORWIN, eight institutes of Information Systems at five universities (Bamberg, Bayreuth, Erlangen-Nuremberg, Regensburg and Würzburg) are contributing their specialised expertise to the joint development of methods aimed at flexibly coupling IT systems beyond the boundaries of individual companies. The spectrum extends from projects that would most appropriately be classified as fundamental research through to the program-

ming of prototypes for practical application in companies.

The general aim is to produce cost-effective solutions that will also allow small and medium-sized companies to flexibly integrate themselves into the supply networks of large business partners.

A number of firms that have emerged as spin-offs from the participating faculties are working together with the Cooperation, as are well-known large companies such as Allianz AG, Datev eG, GfK Gruppe and SAP AG.

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FIELDS OF WORK WITHIN THE COOPERATION:



Coordination of information processing between the companies in a supply chain

FORWIN is testing open software architectures that are particularly oriented toward component-based heterogeneous IT systems and which implement inter-company business processes, including modern mobile communication. Prompt controlling of the supply chain is necessary if quality is to be assured. For this reason, the FORWIN scientists are also working on a tool that will be able to measure and improve the flexibility of interorganizational business processes.

particular requirements as they seek a successful entry into e-business. Reference models for software selection permit a comparison between different suppliers, and provide the software manufacturers with information as to which functions can most usefully be combined in typical software modules.



Strategic advice and the selection of software modules in e-business

FORWIN is developing knowledge-based tools that will primarily be of assistance to small and medium-sized companies in finding the right strategies and software modules appropriate to their



Problem-free trading in electronic markets

FORWIN is creating private marketplaces and advisory systems for marketing and selling products and services on the Internet. Their special feature is that the systems are also capable of dealing reliably with orders for highly diverse goods, for example from the furniture or tourism sectors. The platforms establish links with other companies such as hauliers, hotels or concert organisers. All those involved are actively informed about the status of the process by the system-controlled message exchange using what are known as push-services.

Security in the handling of business processes

When IT systems are coupled, security loopholes can occur, for example in access control systems, password management or the encryption of data. FORWIN is contributing to the definition of a uniform security platform, and is promoting innovative procedures for user identification.

Virtual communities

Interest groups such as small shareholders who communicate via electronic forums on the Internet are playing an increasing role in electronic trading. FORWIN is investigating how such "virtual communities" are developing over time and what effect they are having on companies' success.



Business partners

ABM Greiffenberger Antriebstechnik GmbH, Allianz AG, Bissantz & Company GmbH, COI GmbH, DATEV eG, Dr. Städtler GmbH, ecenta AG, FCS Fair Computer Systems GmbH, Framatome ANP GmbH, Grundig AG, GfK Gruppe, IBIS MULTAMEDIO Informationssysteme GmbH, IBIS Prof. Thome AG, Leoni AG, RCI GmbH, SAP AG, Schutzgemeinschaft für Bankkunden, Schutzgemeinschaft der Kleinaktionäre, Systematics AG Internet Application Services.