

Minitrack: Advancing Enterprise Resource Planning Through Technology

Track: Enterprise Systems (SIGEntSys)

Minitrack Chairs:

Karl E. Kurbel

European University Viadrina Frankfurt (Oder), Grosse Scharrnstr. 59,
D-15230 Frankfurt (Oder)

Germany

e-mail: kurbel.bi@uni-ffo.de

Jorge C. Marx Gomez

Carl von Ossietzky University, Ammerlaender Heerstr. 114-118, D-26129

Oldenburg

Germany

e-mail: jorge.marx.gomez@uni-oldenburg.de

Description

Enterprise resource planning (ERP) systems have evolved from large monolithic systems to more and more fragmented systems distributing just about any aspect of a system: functions, processes, data, hardware and infrastructure. This change has gone hand in hand with the incorporation of more and more business functionality into ERP. Starting from material requirements planning (MRP) and manufacturing resource planning (MRP II), the financial and human resources functions as well as executive information systems and eventually long-term strategic planning support for senior management have been included.

These developments have made an ERP system "the" core information system of an organization – and the technological backbone that other information systems need to collaborate with. ERP related functionality such as supply chain management (SCM), customer relationship management (CRM) and supplier relationship management (SRM) is either integrated, embedded or closely coupled with an ERP system.

Software, hardware and networking technology has enabled the increased importance of ERP systems, but it also posed technological and managerial challenges. In contrast to the early ERP monoliths, we nowadays have distributed architectures – both conventional in-house architectures such as client-server and service oriented architectures (SOA) as well as externally hosted architectures used by application-service-providing (ASP) and software-on-demand solutions. With the appearance of mobile commerce, software-as-a-service (SaaS) approaches and cloud computing, additional challenges have emerged.

Technologies such as radio frequency identification (RFID) have opened up new opportunities for an organization to act and react in real-time. RFID, smart items and the "Internet of things" impose new requirements on ERP systems, such as being capable of context-aware information processing.

For the new technologies to be successfully implemented, security issues need to be resolved and a satisfactory level of trust in the technologies has to be created. The major vendors' inability to generate significant revenue from software-on-demand solutions indicates that businesses are not ready yet to adopt out-of-house ERP solutions on a large-scale basis. The hurdle is likely to be even higher when anonymous providers of infrastructure and services come into the game, as is the case with cloud computing. Organizations seem to be hesitant about having their mission-critical business processes run

somewhere out in a "cloud" and maintaining their core business data in a nirvana. The rationale of this minitrack is exploration of new technologies that can further enhance enterprise resource planning. We invite papers that pursue a constructionist approach to information systems development, following an engineering-like or design-science research style. Papers presenting the development of prototypes as a proof of concept are welcome. Technology-oriented papers should give consideration to the business value of the proposed approaches or solutions.

Suggested Topics

- Architectures for ERP and related business information systems
- ERP systems based on service oriented architectures (SOA)
- Software-as-a-service (SaaS) solutions for ERP and related areas
- Orchestrating an ERP system from web services/enterprise services
- ERP on demand for small and medium-size enterprises
- Federated ERP systems, standardization and collaboration issues
- ERP and cloud computing
- Impact of virtualization and infrastructure-as-a-service on ERP
- Integrating RFID solutions with ERP
- Impact of the "Internet of things" on future ERP systems
- Integrating legacy ERP systems with new components using state-of-the-art technologies
- Mobile ERP and related areas such as mobile SCM, mobile CRM and mobile SRM
- Security issues and trust in new technologies for enterprise resource planning