
Editorial

Andrew N.K. Chen

Accounting and Information Systems,
School of Business, University of Kansas,
Lawrence, KS 66045-7585, USA
Fax: (785) 864-5328
E-mail: andrewchen@ku.edu
E-mail: andrew.chen@asu.edu
E-mail: achen@ku.edu

Biographical notes: Andrew N.K. Chen is an Assistant Professor at the University of Kansas. His current teaching and research interests include knowledge management, IT business value, electronic commerce, database management, and business and web programming applications. His research work appears in *Decision Support Systems*, *European Journal of Operational Research*, *Journal of Electronic Commerce Research*, *Journal of Management Information Systems*, *MIS Quarterly*, and international conferences such as *AMCIS*, *DSI*, *ICIS*, and *WITS*.

Services Oriented Architecture (SOA) represents the framework for the latest generation of service-based computing where once proprietary and monolithic applications are broken down into components and exposed through open standards for use by both internal and external enterprise partners. The SOA paradigm is argued to include in its list of benefits a higher return on investment, increased software reuse, and the capability to support dynamic service assembly. In this special issue, we have five excellent research papers tackling a variety of important issues of SOA.

Considering potential use and benefit of SOA for organisations, Boh and Yellin seek to answer two important questions:

- What are the key managerial factors affecting SOA implementation in organisations?
- Does the implementation of SOA provide benefits to organisations?

They conduct a firm-level cross-sectional survey with 108 organisations and their study shows that

- top management support was a significant enabler for SOA implementation
- organisations implementing SOA gained the benefits of improved application integration
- implementation of SOA enables companies to establish external linkages with business partners more quickly, by facilitating the use of industry XML standards.

Baskerville et al. presents a case study of a bank on how SOA impact Information and Communication Technology (ICT) and organisations. This study also echoes other studies presented in the previous special issues of IJITM on ICT-related topics. Authors find that the strategic rewards in the adoption of SOA appear to go beyond marketplace issues of ICT capability acquisition, and unexpectedly arise in the creation of an extensible organisational ICT architecture. The extensibility of the ICT architecture that results from the adoption of SOA provides potential for greater organisational agility (and thereby competitiveness).

With a shift in IT platform, the importance of research connecting characteristics of the new platform to antecedents of performance improvement becomes critical in order to understand, prioritise, and begin to analyse the new management and organizational imperatives driven by the architectural shift. Chen and Nichols seek to lay a foundation for the analysis of the relationships between SOA and previously discovered antecedents to organisational performance. In this paper, authors review the fundamentals of SOA and the literature regarding IT and firm performance, and then present a research model for examining the impact of SOA and other firm's resources/capabilities on the performance of a firm and a value network. Their analysis and propositions provide guidelines for future research and knowledge advancement in the area of SOA and IT business value.

Brehm and Gomez further propose that in theory a cross-vendor composition of ERP functions becomes possible whereas the coordination of this process is individual and vendor-independent. Their paper presents the approach of a Federated ERP (FERP) system on the basis of Web Services and Peer-to-Peer (P2P) networks as a first step in this direction. Authors propose a component-oriented system design and the application of the SOA paradigm. Furthermore the distribution of ERP system components over P2P networks is considered and they show an example business process and point out first evaluation activities.

Finally, Wang et al. tackle the important issue of service selection concerning web services and SOA. They present the SLF4SS, a self-learning framework for services selection. The main features of SLF4SS include

- learning from previous match samples to help users discover appropriate services
- using multi-dimensional properties to represent services for evaluation and selection
- optimising the overall property of the composite service appropriate to users' constraints and preferences
- addressing vague user requests.

SLF4SS can simplify the selection of suitable web services in building high level services for various business applications, reduce the implementation cost, and shorten the time for deploying enterprises applications under SOA.