Selected Topics on Business Information Systems: Editorial Introduction to Issue 11 of CSIMQ

Kurt Sandkuhl [*]

University of Rostock, Chair Business Information Systems,
Albert-Einstein-Str. 22, 18059 Rostock, Germany

kurt.sandkuhl@uni-rostock.de

Information and Communication Technology (ICT) plays an important role in enterprises, public authorities, inter-organizational networks, company clusters and other kinds of distributed organizations. Business, value creation and supporting activities in organizations are dependent on complex, distributed software and service systems operating in dynamic and often changing environments. In order to produce and supply products and services efficiently, organizations must be able to effectively exchange information between internal stakeholder groups and with external collaborators and customers. A high level of agility and interoperability is required when it comes to meeting the changing requirements from market or technical environments. The demand for interoperability exists at technological, business process and knowledge levels. Methods, theories and tools that ease change and adaptation of business processes, organizations and their supporting IT-systems are needed.

Current challenges in business information systems also include human-oriented, personalized and secure, high-quality systems enabling their users to cope with the large variety of frameworks, technologies and tools needed to accommodate emerging business applications. Research in the field of business information systems traditionally contributes methods, technologies, tools and practices for technological, social-technical and societal aspects of these challenges.

The content of this issue presents novel research results in business information systems. Most of the articles in the issue originate from the 15th International Conference on Perspectives in Business Informatics Research (BIR 2016) in Prague (Czech Republic) and the 9th International Workshop on Information Logistics and Applications of Semantic Technologies (ILOG), which was co-located with BIR 2016.

The five accepted articles address different technical and methodic aspects of business information systems and various their application fields:

- The work of Kuhlisch applies semantic technologies for information security purposes in health care. In this context, potential clashes between different types of security policies are discussed and Attribute-based Access Control (ABAC) is proposed. The article includes a

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[*] Corresponding author

semantic model for ABAC policies with predefined policy conflict categories and a conformance verification function.

- Fischer-Pauzenberger and Schwaiger present an article related to modeling issues in business information systems. In the context of the REA Accounting Model, which offers a general framework for modeling the economic rationale of business transactions, they use OntoUML to identify and conceptualize essential primitives of the REA model.
- Lagerström, Johnson, Ekstedt, Franke, and Shahzad contribute to enterprise architecture management. The authors base their work on the Multi-Attribute Prediction Language (MAPL) and address the non-functional qualities where MAPL supports automated analysis. The article introduces how service cost, service availability, data accuracy, application coupling, and application size are modeled and quantitatively analyzed based on the ArchiMate standard.
- Alexa and Repa also position their work in the field of enterprise architecture management. They take the perspective of a process-driven organization and investigate the aspect of business-IT alignment. The article elaborates on principles and constructs for the model of a holistic layer of the enterprise architecture on a basis of process driven approach.
- Khamis and van der Weide address the application field of e-government with a focus on the cooperation between governmental organizations and stakeholder interaction. The article starts from a conceptual language developed for the application domain and uses this to define dynamic factors. The resulting extended causal diagram is transformed into a framework for System Dynamics.

The CSIMQ editorial team would like to thank the reviewers of this issue for providing valuable comments and improvement proposals for the submitted papers.