Enterprise Modelling and Information Systems Architectures

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Editorial Preface

The need for reducing the gap between business requirements on one hand and enterprise computing on the other has been recognized and discussed by researchers as well as practitioners for a long time. In this context, both business and information technology (IT) dimensions of enterprise procedures must be captured and analysed. In this regard, enterprise modelling and enterprise architecture management can be considered as means that facilitate the alignment of business with IT. This issue comprises four papers dealing with different aspects of enterprise modelling, enterprise architecture management, and enterprise data quality management. In particular, it addresses some of the core challenges to be tackled when aiming at a successful conduct of enterprise modelling as well as the alignment of business and IT thereafter.

Enterprises need high-quality data for the proper support of their daily business as well as for making the right strategic business decisions. In turn, this necessitates continuous maintenance and optimization efforts in respect to data quality through enterprise-wide initiatives. The article 'A Maturity Model for Enterprise Data Quality Management' by Martin Ofner, Boris Otto and Hubert Österle presents the design of a maturity model for enterprise data quality management. In particular, the maturity model aims to support enterprises in their efforts to realize an enterprise-wide data quality management. The hierarchical maturity model comprises 30 practices and 56 measures that may be used to assess enterprise data quality management. The article not only presents the design of a maturity model for enterprise data quality management, but also gives insights in maturity model design in general.

In enterprise modelling there exists a well-known semantic gap between multi-view modelling methods and the conceptual design of corresponding modelling tools. In their article 'Bridging the Gap from a Multi-View Modelling Method to the Design of a Multi-View Modelling Tool', Domenik

Bork and Elmar J. Sinz deal with this semantic gap. As a particular challenge, the handling of the multiple modelling views needs to be aligned with the modeller's way of reconstructing the relevant part of the real world to be captured. The authors present a sophisticated modelling scenario, discuss relevant use cases, and introduce advanced tool functions. The suggested approach is then applied to SOM business process modelling. Finally, the tool implementation is based on the ADOxx meta- modelling platform.

Meta modelling constitutes another challenging area in enterprise modelling. The article 'Developing Graphical Model Editors for Meta-Modelling Tools' by Hanns-Alexander Dietrich, Dominic Breuker, Matthias Steinhorst, Patrick Delfmann, and Jörg Becker discusses fundamental requirements for graphical model editors as used in a meta-modelling tool. Corresponding tools have been proposed to facilitate the development and adoption of domain-specific modelling languages (DSMLs), which comprise domain-specific concepts and assign diagrammatic representations to them. The authors suggest DSML visualisations in the context of a distributed modelling scenario. In particular, they present a conceptualisation of how a graphical model editor should be designed. Further, they provide a sophisticated implementation used as part of a meta-modelling tool. Particular challenges in this context have been the proper design of the graphical visualizations of the conceptual elements, the handling of features beyond displaying static icons, and the guarantee of consistency when reusing graphical representations in different, potentially integrated DSMLs.

A professional IT management is crucial in complex and dynamic environments. Both IT portfolio management and enterprise architectures (EA) have been introduced as fundamental management practices to enable IT management. The article 'Integrating IT Portfolio Management with Enterprise Architecture Management' by Daniel

Simon, Kai Fischbach and Detlef Schoder addresses two major research challenges relevant in this context. First, it elaborates the commonalities and differences of IT portfolio and EA management, and discusses in what way they can be integrated, especially at the process level. Second, the authors suggest an integrated process design for EA management and project portfolio management. In order to deal with the first research challenge, a process map for EA management, which includes the main areas of IT portfolio management, is developed. In turn, the procedural interplay between IT portfolio and project portfolio management is investigated in the context of the second research challenge.

As a final remark we would like to point out that this issue, despite the fact that we did its final assembly, was mainly in charge of Ulrich Frank. After doing a great job in setting up and establishing this journal, Ulrich Frank backs out as editor in chief and we both took over. We thank him for his precious work, are looking forward to drive the EMISA journal's further development and hope that you will enjoy reading this issue.

Manfred Reichert   **Klaus Turowski**

Editors in Chief

Editors' contact information:

Prof. Dr. Manfred Reichert
Institute of Databases and
Information Systems
Ulm University
James-Franck-Ring
89081 Ulm
Germany
manfred.reichert@uni-ulm.de

Prof. Dr. Klaus Turowski
Magdeburg Research and
Competence Cluster (MRCC)
Chair of Business Informatics I
Otto-von-Guericke University
Universitätsplatz 2
39106 Magdeburg
Germany
klaus.turowski@ovgu.de