OMiLAB: The Role of Model-driven Digital Innovation in Information Systems Development

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Abstract

OMiLAB is a community of practice interested in the value of conceptual models and the role they play in Information Systems development or operation. One key value proposition of the OMiLAB is a Digital Innovation environment having conceptual modeling at its core, as a means for integrating a business-oriented view with a technical view. The business-oriented view is based on a Digital Design Thinking method, whereas the technical view benefits from a diverse set of model-driven IoT devices for cyber-physical experimentation. The semantic and functional integrator between the two views is the BEE-UP modeling tool, together with the Agile Modeling Method Engineering framework - which can be employed to expand the modeling tool's semantic space with domain-specific and technology-specific concepts or functionality.

Academic and industry partners are joining the OMiLAB ecosystem as OMiLAB Nodes, sharing knowledge assets and artifacts developed with the help of OMiLAB's Digital Innovation environment. These are disseminated via dedicated research streams and scientific events such as the NEMO summer school (initiated in 2014), the PROSE workshop (initiated in 2017) and a Springer book series on domain-specific conceptual modeling (initiated in 2016). Tool-specific tutorials have been held in recent Business Informatics and Information Systems conferences (e.g. HICSS, BIR, PoEM) to raise awareness on the value of conceptual models for such communities.

Recently, the OMiLAB-FSEGA node was established at Babeș-Bolyai University, Faculty of Economics and Business Administration. The thematic focus of the node is Digital Business Models, targeting topics such as semantics of Product-Service Systems, their dynamic pricing, supplying and automated delivery from a design-oriented research perspective. In relation to this thematic specificity, the talk will highlight the value of this node for both research and education.

Bio: Dimitris Karagiannis is a full professor for Business Informatics at the University of Vienna since 1993, leading the Research Group Knowledge Engineering (www.dke.univie.ac.at). He received his PhD degree from the Technical University Berlin in 1987. The same year he joined the Research Institute for Application-oriented Knowledge Processing in Ulm as division head for "Enterprise Information Systems". He holds an honorary professorship from the Babes-Bolyai University in Cluj-Napoca, Romania. His research interests include meta-modelling, knowledge engineering, business process management, enterprise architecture management and artificial intelligence techniques. The industrial application of his meta-modelling research was demonstrated within the BOC Group (www.boc-group.com), an international software- and consulting company, founded in 1995. The scientific applications of his research impacts the Open Models Laboratory—OMiLAB (www.omilab.org), established as a non-profit organization since 2018, located in Berlin/Germany.