

Enterprise Ontology Driven Software Generation

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Abstract: Model Driven Engineering has been with us for quite some time, the most well known approach being OMG's Model Driven Architecture. However, although it has brought substantial benefits compared to other software engineering approaches, Model Driven Engineering presently still suffers from two major shortages. First, it is unable to deliver domain models from which the correct functional requirements can be derived. Hence, true validation is hardly possible: the software does not meet user expectations. Second, their models to be produced during the system development process, are not formally defined. Hence, their verification remains a cumbersome task. One of the theoretical pillars of Enterprise Engineering (EE) is the Generic System Development Process. It distinguishes between the using system and the object system (the system to be built), and it states that any software development process should start from the ontological construction model of the using system. In addition, EE's systemic notion of Enterprise Ontology offers a formalized ontological model of an enterprise that satisfies the C4E quality criteria (coherent, consistent, comprehensive, concise, and essential). An operational application software generator will be presented that takes this ontological model, with some extensions, as source code input and executes the model as a professional software application. Changes in the software, as required by any agile enterprise, are brought about 'on the fly', through re-generation, based on the modified ontological model of the enterprise.

BRIEF BIOGRAPHY

Jan L.G. Dietz is emeritus full professor in Information Systems Design at Delft University of Technology, full professor in Enterprise Engineering at Delft University of Technology, and director of Sapio (www.sapio.nl). He holds a Master degree in Electrical Engineering and a Doctoral degree in Computer Science. He has published over 200 scientific and professional articles and books. His current research interests are in the emerging discipline of Enterprise Engineering, of which Enterprise Architecture, Enterprise Ontology, and Enterprise Governance are the major pillars. Before his academic career, he has practiced application software engineering for ten years in industry. Jan Dietz is the spiritual father of DEMO (Design & Engineering Methodology for Organizations), and honorary chairman of the Enterprise Engineering Institute (www.ee-institute.com). For the development of Enterprise Engineering, he chairs the international research network CIAO! (www.ciaonetwork.org). He also acts as editor-in-chief of a book series on Enterprise Engineering, published by Springer. For more information, visit http://en.wikipedia.org/wiki/Jan_Dietz.

