Master project: Enterprise Architecture Analysis: Design and Development of Additional Analysis Scenarios in MEMO4ADO

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Semester: Sommersemester 2017

Language: English

Motivation

The method Multi-Perspective Enterprise Modeling (MEMO) encompasses a set of integrated modeling languages to describe, analyze, and (re-)design organizational action systems and information systems (IS). In order to involve students in the use and further development of the method, a modeling tool is needed which is tailored specifically for educational purposes. The open (meta) modeling environment ADOxx offers a suitable basis for this purpose, as it is freely extensible and especially accessible for modeling beginners. Therefore, within the MEMO4ADO project a specific subset of MEMO modeling languages using the (meta) modeling tool ADOxx (ADOxx Development and Modeling Toolkit) has been implemented. This subset consists of four languages: The MEMO OrgML focusing on organisational structures, the MEMO OrgML focusing on business processes, the MEMO GoalML to describe organisational goal systems, and MEMO ITML to describe IT infrastructures. Taken together, these languages and concepts provide a coherent method subset to aid basic strategic, organisational, and infrastructural analyses. MEMO4ADO is openly available at: www.omilab.org and has been successfully applied to support the teaching process.

Description

The main aim of this master project is to design and develop further extensions to the already existing implementation MEMO4ADO that would allow to perform further analyses of various aspects of enterprise action system and information systems. Of particular interest would be the implementation of the already proposed method to assess the level of integration (data view) of IT infrastructure.

Therefore the project encompasses:

- Getting to know the ADOxx meta modeling and development platform and its possibilities (including ADO Scripts)
- Getting to know the languages implemented within the MEMO4ADO tool
- Identifying and designing various analysis scenarios, which may be performed based on the integrated enterprise models. The integration assessment scenario will be provided by the supervisor.

- Implementation of the designed scenarios within the tool. If the implementation of the intended analysis scenario(s) would not be feasible within the ADOxx environment itself, other solutions involving the export of data to some external environment should be considered.

Expected outcomes: the extensions to the MEMO4ADO, project report, documentation of the implemented extensions.

Application procedure: Please apply via email to the supervisor. Please attach a short letter of motivation (app. ½ A4 page) and a recent performance record ('Leistungsnachweis'). You can apply individually or in a group of 2-4 participants (in this case each person should still send a separate e-mail, however point to the other members of the group). In case you are applying also for other projects, please mention it in the email.

Application deadline: 05.05.2017

Literature:

- Bock, Alexander; Frank, Ulrich: Multi-Perspective Enterprise Modeling – Conceptual Foundation and Implementation with ADOxx. In: Karagiannis, Dimitris (Hrsg.): Domain-Specific Conceptual Modeling – Concepts, Methods and Tools. 2016.
- Niemann, K. D. (2005). Von der Unternehmensarchitektur zur IT-Governance: Bausteine fur ein wirksames IT-Management.
- Resources available at the ADOxx website (https://www.adoxx.org/)