

Enterprise Modelling and Information Systems Architectures

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Vision and goals

The primary goal of the Open Model initiative is to collaboratively develop reference models for everyone to use, modify, copy, and distribute in an open and public process. Therefore, the project seeks to build an open modelling community and to initiate an open modelling process.

The Open Model initiative draws inspiration from the successes of open source software development projects as the prime example for collaborative community processes by geographically dispersed participants, hence its name. Primary artefacts collaboratively developed by the open model community are “open reference models” or “open models” for short.

The project also aims at developing a software infrastructure for collaborative modelling which includes version management of models and associated documentation, facilities for model review, and more. In its current initial state, the project needs a thorough requirements analysis and, thus, an open discussion about its vision, goals, and possible issues.

A long-term vision is to build a repository of reference models for use in organisational planning and modelling, software development, teaching, and research. As enterprise resource planning (ERP) systems are one prime example of the need for and use of reference models, our vision is to eventually cover many different aspects of the enterprise, e. g. accounting, manufacturing, finance, and marketing.

How to participate

The project is currently in its nascent state. The website at openmodels.org marks the initial effort to build and sustain an open modelling community. For more information on the initiative's current state, please consult additional information at openmodels.org. The site provides background material for download, a repository of open models as well as FAQs, How-To guidelines and more.

The initiative needs visionaries, modellers, reviewers, software developers, documentation writers, and evangelists.

- If you know an industry inside-out, you can help by making suggestions for new models and by reviewing existing models.
- If you are interested in creating process, data, or object models, you can contribute by submitting new models and by refining existing models.
- If you consult with others, you can help by promoting the use of open models and by using open models in your work.
- If you like to code, you can help by designing and implementing model versioning, in-browser model reviews, and other support tools.

We welcome your contributions! Have a look at openmodels.org and help building an open model community.

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Editorial Preface

At first sight, "Wirtschaftsinformatik" and Computer Science as well as the IT industry are in an enviable situation. There is a tremendous demand for professional IT services. IT companies are driven by full order books and the prospects of ever growing revenues. Those who offer IT-related programmes at universities are rewarded by a demand for graduates that sometimes reminds of the recent Internet hype. However, the current appreciation of IT expertise comes with a serious drawback. We experience a massive shortage of qualified IT professionals. Companies have a hard time staffing their projects – not to speak of opportunities they miss due to the lack of adequate candidates on the job market. This shortage is not only a challenge for IT firms. But it also hinders the further development of our economy, since the conception of advanced IT solutions as well as the design of corresponding more efficient business processes is the key instrument for a higher level of productivity and – as a consequence – improved competitiveness on an international scale. While the current appreciation of IT expertise is a blessing for universities that offer programmes in Computer Science and "Wirtschaftsinformatik", it is a burden at the same time. It is getting more and more difficult to fill research positions, since business firms grant high potential graduates salaries that are far beyond the possibilities of a university. With respect to student assistants, the situation is even worse. Students are offered part-time jobs that include a relatively high amount of responsibility and that are paid well. For many students, this appears as an attractive option: Not only that they make money, their work also receives a rewarding appreciation – especially in SMEs that depend on students to manage important parts of their IT. Thus, from a university perspective, the current demand for students is not only gratifying, because it makes it extremely difficult to fill positions for student assistants. Since our research projects depend on the participation of student assistants, this is a severe threat to university research in various IT-related areas.

Apparently, there is a need for increasing the number of students in Computer Science and "Wirtschaftsinformatik" programmes. Unfortunately, the recent trend in student enrolments does not correspond to this need. In both fields, the number of first year students has gone down during the recent years. In the US and in Australia, the reported decline in student enrolment has been dramatic. We may assume that this development was in part caused by the harsh disillusionment that followed the Internet euphoria. It

was probably also caused by numerous "experts" who predicted a devastating impact of IT offshoring on career opportunities in the US and Europe. To overcome this unpleasant development, a combination of various measures has to be taken. Firstly, we need to participate in the public discussion on the future of IT-related jobs in order to clarify that there will be a continuing demand for those who combine IT expertise with domain specific knowledge. Secondly, it is required to convey a more realistic idea of Computer Science and "Wirtschaftsinformatik" to high school students. However, I am afraid that many teachers at the high school level are currently overcharged with such a task. The ACM as well as the Gesellschaft für Informatik promote teaching of Computer Science in schools. It might be a good idea to enrich high school curricula with appropriate lessons on conceptual modelling as well to emphasize that dealing with IT includes analyzing and solving real world problems.

Three of the papers in this issue have been selected from papers that were presented at the EMISA conference which took place in St. Goar last October. Enterprise architectures serve to provide abstractions of IT systems that support the effective alignment of business and IT. This recommends a graphical illustration of architectures that is comprehensible for various groups of stakeholders. Sabine Buckl and her coauthors present an approach that allows for generating elaborate graphical illustrations of enterprise architectures from semantic models. Ronny Fischer, Stephan Aier, and Robert Winter describe a method to maintain enterprise architectures efficiently. An increasing number of projects is aimed at the efficient support of cross-organizational business transactions. This requires accounting for analysis and design methods. In their article, Jörg Ziemann, Thomas Matheis, Jörn Freiheit describe and evaluate modelling languages and methods against a set of relevant requirements for modelling cross-organizational business processes.

The Open Model Initiative that I briefly mentioned in the previous issue's editorial is gaining momentum. Stefan Strecker and I elucidate why open reference models could tremendously promote the efficiency of software development and use – provided certain challenges are met successfully.

I wish you enjoy reading this issue. In case you have any comments or questions, feel free to contact me.

Ulrich Frank