MODELS 2012
innsbruck

6th International Workshop on Multi-Paradigm Modeling – MPM'12

October 1, 2012 – Satellite event @ MODELS 2012 – Innsbruck, AUSTRIA

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Scope of the Workshop

Computational modeling has become the norm industry to remain competitive and be successful. As such, Model-Based Design of embedded software has enterprise-wise implications and modeling is not limited to isolated uses by a single engineer or team. Instead, it has reached a proliferation much akin to large software design, with requirements for infrastructure support such as version control, configuration management, and automated processing.

The comprehensive use of models in design has created a set of challenges beyond that of supporting one isolated design task. In particular, the need to combine, couple, and integrate models at different levels of abstraction and in different formalisms is posing a set of specific problems that the field of Computer Automated Multi-Paradigm Modeling (CAMPaM) is aiming to address.

The essential element of multi-paradigm modeling is the use of explicit and heterogeneous models throughout. This leads to a framework with omnipresent models. Some represent the syntax of formalisms used for modeling, others are used to model the transformations that represent the operational semantics, as well as model-to-model transformations for inter-formalism transformation. Moreover, others are used to model the composition of models or even to model the composition of modeling formalisms. These models are then used to facilitate generative tasks in a language engineering space, such as evolving a domain specific modeling formalism as its requirements change, but also in a tool engineering space, such as automatic generation of integrated development environments. The use of ubiquitous explicit models during the whole system design process, from modeling formalism definition to system implementation, allows multiple types of analyses at various levels with great benefits in terms of performance, cost-effectiveness, safety, etc.

The purpose of this workshop is to bring together researchers and practitioners in the area of Multi-Paradigm Modeling in order to identify possible points of synergy, common problems and solutions, tool building aspects and visions for the future of the area.

This year, a dedicated industry track will be organized.

Topics of interest (not limited)

- **Heterogeneity in models:** multi-domain and multi-physics modeling, multi-view modeling, multi-abstraction modeling;
- **Heterogeneity in modeling languages:** engineering of modeling language, modeling Models of Computation (MoCs), quality evaluation and usability of modeling languages;
- **Multi-Paradigm Modeling techniques:** model transformation, model composition, modeling cross-domain interactions, model-based detection of unanticipated interactions in heterogeneous systems, visualization of multi-paradigm models;
- **Applications of current MPM techniques, in particular industry applications**.

Contributions should clearly address the foundations of multi paradigm modeling by demonstrating the use of models to achieve the stated objectives and discuss the benefits of explicit modeling.

Important dates

Paper submission deadline: **July 26, 2012**
Notification of acceptance: **September 3, 2012**
Camera-ready papers due: **September 10, 2012**

Submission procedure

Papers must be submitted electronically as PDF via: http://avalon.aut.bme.hu/mpm12/
There could be conceptual papers as well as application or tool papers.
Papers may be short (max. 2 pages) or full (max. 6 pages) and follow the ACM SIG style available at the workshop web site.
Papers will be peer reviewed by at least three members of the program committee.
All accepted workshop papers will be published in the ACM Digital Library.