Preface

In recent years there has been growing interest in the use of multi-level modelling approaches to better represent the multiple classification levels that are frequently found in the real world and are needed to effectively engineer languages. Multi-level modelling approaches have not only been successfully used in numerous industrial projects and standards definition initiatives they are now supported by an array of dedicated tools.

However there is still no clear consensus on what multi-level modelling actually is and what kinds of constructs and concepts provide the best support for it. For example, there are diverging views on whether it is sound to combine instance facets and type facets into so-called clabjects, whether strict metamodelling is too restrictive, and what principles should be used in establishing meta-level boundaries, etc.

The MULTI 2014 workshop was established to address this problem by bringing together researchers and practitioners with an interest in multi-level modelling to foster a fruitful cross-pollination of ideas and lay the foundation for a unified discipline. In particular, the workshop aimed to identify a set of criteria for judging the strengths and weaknesses of different multi-level modelling approaches and for defining possible benchmark case studies. To this end, the workshop encouraged submissions on new concepts, implementation approaches and formalisms as well as controversial positions, requirements for evaluation criteria or case-study scenarios. Contributions in the area of tool building, multi-level modelling applications, and educational material were also welcome.

From a total of 16 submissions, 12 papers were selected that addressed a range of topics related to multi-level modelling. In terms of technology papers, three papers presented proposals for enhancing existing multi-level modeling approaches, two papers presented alternative formal foundations for multi-level modeling, and two papers presented approaches for checking the consistency and integrity of multi-level models. A further four papers presented applications of multi-level modeling to different scenarios; two focusing on industrial applications and two focusing on the applications of multi-level modeling to the ubiquitous problems of interoperability and big, distributed data. Finally, the remaining paper presented ideas for improving the way in which multi-level modeling approaches can be evaluated and compared. In addition to two paper sessions, the workshop included an invited talk answering the question "What is Multi-Level Modeling?" and two plenary discussions focused on core multi-level themes and the future of the fledgling multi-level community.

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