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Preface

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Preface

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Abstract: Collocated with the ACM/IEEE International Conference on Model-Driven Engineering Languages and Systems (MODELS), the Educators' Symposium (EduSymp) focuses on the huge topic of software modeling education ranging from experience reports and case studies to novel pedagogical approaches. In the following, we shortly report on the 6th EduSymp held in October 2010 in Oslo.

Keywords: Modeling Education, Pedagogy for Modeling

1 Background

Over the last years, the technologies necessary to develop according to the model-driven engineering paradigm have made a huge step forward from mere academic research prototypes to mature production ready tools. These model-based technologies support handling the ever increasing complexity of modern software systems by raising the abstraction level. For their practical applications, developers are required which have been trained on working based on this higher level of abstraction. Consequently, an adoption of the curricula of computer science is necessary to prepare future developers for the model-driven engineering technologies and to provide them with the skills necessary for their successful application. However, although model-driven engineering is already used in industry, it is still a young and emerging research discipline where it is not clear which technologies are just short-lived trends and which approaches have a long-lasting impact. The challenge here for educators is to find a compromise between well-established basic principles and the novel state-of-the-art technologies.

To provide a forum to the educators and trainers from both academia and industry to exchange experiences and to discuss current trends and novel directions to follow in software modeling education the Educators' Symposium (EduSymp) has been established as a fixpoint at the MODELS conference. In the remainder of this paper, we summarize the Educators' Symposium 2010.

2 Résumé on Educators' Symposium 2010

Despite the early hour, the EduSymp started with a well attended keynote with the title "Formality in Education – Bitter Medicine or Bitter Administration?' held by Thomas Kühne. In this

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keynote, dos and don'ts were demonstrated to gain/to lose the students' attention and to make them understand the teaching material. After the keynote, oral paper presentations where given. The papers are included in this volume.

One third of the symposium was dedicated to discussions and a panel on the important topic of tooling in modeling education. In the forefront of the symposium, an online survey[1] has been conducted to gain an impression about the current situation concerning modeling tools in education. Within this context, the following questions have been discussed:

- The field of software modeling continues to change rapidly. At what point in the continuum of change shall we start to teach modeling?
- Do students consider models to aid in software development or are they viewed as pretty pictures only?
- Can the benefits of modeling be realized without having proper tool support?
- Are tools imposing an extra inhibition/threshold in teaching modeling?
- Is it necessary for modeling tools to conform to standards or is it more important that they provide simplified concepts tailored for didactical purposes?
- Is it positive/negative when students are forced to use a specific tool implementation from a specific vendor? Do we teach them knowledge with an expiration date?

The generals consensus was that in software modeling education, teaching theory only is not enough, but hands-on experience of the students is indispensable. On the one hand, students are more motivated if they get some tools to play with, on the other hand, they only understand the taught concepts if they have the possibility to practically apply them. In the context of model-driven engineering, they have to be shown that the creation of models (which seems to be an overhead only at the first look), overcomes traditional software engineering approaches within many aspects.

As the courses on modeling cover a wide spectrum reaching from basic modeling courses over traditional software engineering courses to model-driven engineering courses, the requirements posed on modeling tools vary for the specific aims. In contrast to previous years, where there was a huge demand for more stable tools, in this year the participants expressed their satisfaction with regards to stability and documentation of the modeling tools. Usability and user-friendliness still poses a major burden to the students.

Overall, this year's symposium was very well attended (between 20 and 50 participants have been participating over the day) which clearly indicates that software modeling education is an important issue within the modeling research community. We hope that the discussions initiated at the symposium will result in interesting novel ideas on the realization on software modeling education and that the next edition of the symposium will continue increasing the awareness on the importance of high quality education.

[1] A summary of the results is available at http://edusymp.big.tuwien.ac.at/slides/survey.pdf.

3 Acknowledgments

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