3rd International Workshop on Software Engineering for Automotive Systems – SEAS 2006

Martin Rappl
TU München
Boltzmannstr. 3
D-85748 Garching
++49-89-289 17360

martin.rappl
@in.tum.de

Alexander Pretschner
Informationssicherheit/ZISC
ETH Zentrum, IFW C 45.2
CH-8092 Zürich
++41-1-632 74 40

alexander.pretschner
@inf.ethz.ch

Christian Salzmann
BMW Car IT GmbH
Petuelring 116
D-80809 München
++49-89-189 311 34

christian.salzmann
@bmw.carit.de

Thomas Stauner
BMW AG
Knorrstr. 147
D-80788 München
++49-89-189 311 34

thomas.stauner
@bmw.de

ABSTRACT

This workshop summary presents an overview of the one-day International Workshop on Software Engineering for Automotive Systems (SEAS 2006), held in conjunction with the 28th International Conference on Software Engineering (ICSE'06). Details about SEAS 2006 may be found at:

http://www.inf.ethz.ch/personal/pretscha/events/seas06/.

Categories and Subject Descriptors

D.2.0 **[Software Engineering]**: Software Quality, Security, Safety Methods; J 7 **[Computers in other Systems]**: Real time

General Terms

Management, Measurement, Documentation, Performance, Design, Reliability, Security, Standardization, Theory, Verification.

Keywords

Automotive Software Engineering

1. Summary

In hardly any other domain there is such a high stress of competition as in the automotive domain; all disciplines which are involved in the chain of economic value added, such as mechanical engineering, electrical engineering and software engineering are strictly bound to cost savings, shorter development cycles while improving the quality at the same time. But there is a big difference between the classical disciplines and software engineering. Software is immaterial. Based upon this fact software often is assumed to be for free – especially in a mass consumer market, where production costs are the predominant factor. But this assumption is definitely wrong..

To establish software as a trading good and to create successful business cases, the maturity of software has to be significantly increased. For that a number of techniques and approaches towards increased productivity and quality exist. Today (1) model-based techniques, (2) product line-oriented reuse approaches, (3) quality standards and (4) process analysis and improvement techniques are widely used to increase productivity and quality in software engineering. The 3rd International Workshop on Software Engineering for Automotive Systems (SEAS 2006) focuses on the first two categories and looks at first applications of those approaches in automotive-specific application fields, such as power train, chassis or infotainment.

In the last few years, automotive Software Engineering has become a recognized sub-discipline of Software Engineering to acquire new and innovative techniques towards quality-oriented software development for car specific software applications. A number of key characteristics, such as a high number of units, the tight dependencies of software components and the distributed development incorporating vendors and suppliers have led to the separation of this discipline. The growing number of workshops and conferences in this area provide a deep insight into research activities; both of automotive industry and universities. In the meantime, Automotive Software Engineering has led the way in many areas such as architecture description and product line development approaches.

The 3rd SEAS-Workshop approves the continuous upward tendency in the Automotive Software Engineering field. This year 23 papers were submitted to the workshop; all in excellent quality. Eight papers were selected for presentation. This corresponds with an acceptance rate of 35%, an excellent selection rate for a workshop. The papers are about equally distributed between university and industry and provide a knowledge exchange between Europe, USA and Asia. The organizing committee would like to thank all authors and workshop participants for their contribution, the basis of any successful workshop. Furthermore, thanks goes to Ms. Frances Paulisch (Siemens) for her excellent support during the organization phase of the workshop, to Ms. Judith Hartmann (Technische Universität München) for managing the extensive review process as well as to all program committee members for their outstanding effort on reviewing the papers.

It has become a tradition to open the SEAS workshops with a keynote address given by a prominent practitioner within Automotive Software Engineering. In the previous years, Jürgen Bortolazzi (DaimlerChrysler), and Bruce Emaus (Vector CanTech) served as keynote speakers. In line with this tradition, SEAS 2006 keynote will be given by Michael Reinfrank, from Siemens VDO.

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Organizers of the 3rd SEAS-Workshop
Alexander Pretschner
Martin Rappl
Christian Salzmann
Thomas Stauner