Preface

Five years on from its adoption in 1997 by the Object Management Group (OMG), the Unified Modeling Language is the de facto standard for creating diagrammatic models of software systems. More than 100 books have been written about UML, and it is taught to students throughout the world. The definition of UML version 2 is well under way, and should be largely completed within the year. This will not only improve and enhance UML itself, including standard facilities for diagram interchange, but also make it fully integrated with other modeling technologies from the OMG, such as Meta-Object Facility (MOF) and XML Metadata Interchange (XMI). The Object Constraint Language, which has become an important vehicle for communicating detailed insights between UML researchers and practitioners, will have a much expanded specification and be better integrated with the UML.

The popularity of UML signifies the possibility of a shift of immense proportions in the practice of software development, at least comparable to the shift from the use of assembly language to "third-generation" or "high-level" programming languages. We dream of describing the behavior of software systems in terms of models, closely related to the needs of the enterprise being served, and being able to routinely translate these models automatically into executing programs on distributed computing systems. The OMG is promoting Model-Driven Architecture (MDA) as a significant step towards this vision, and the MDA concept has received considerable support within the IT industry. But to turn such a dream into reality demands many breakthroughs. We only understand how to transform models into code for some special cases. Numerous practical difficulties such as problem determination, performance, scaleability and change management stand in the way. We can model program designs, but are only beginning to understand how to model other artifacts involved in the end-to-end vision such as architectures, business processes, business rules, software components, and organizations. We have interoperability standards by which computers can communicate world-wide, but these leave vast numbers of questions unanswered in areas such as security, quality of service, and verification. The day-to-day usage of UML, by and large, is still just to draw pictures and to convert them manually or at best semi-automatically into code. For real programmers, code remains king.

The ≪UML≫ series of conferences is the leading forum for researchers and practitioners to work together to present, discuss, and develop innovative ideas about UML and related technologies. This conference, the fifth in the series, presented an ideal opportunity to move forward the vision of model-driven development, and to continue to enrich our understanding of how to implement, apply, and develop UML, leading to innovations both in research and in industrial practice.

In total 127 abstracts and 99 papers were submitted to this year's conference, of which 25 research papers and 5 experience papers were selected by the program committee for presentation. As in previous years, this year's conference included a two-day tutorial and workshop session, in which six tutorials and five workshops were scheduled, as well as two panels. The primary purpose of these sessions was to provide a more informal forum for discussing state-of-the-art research in UML. Topics included: Metamodeling, Pattern Oriented Analysis and Design, Dependability Modeling and Evaluation, Establishing Inspection Criteria, Scalable System Designs, Code Generation, Critical Systems Development, Aspect Oriented Modeling, Software Model Engineering, Modeling Non-functional Aspects, Consistency Problems, Model-Driven Architecture, Testing. A short description of the workshops, tutorials, and panels can be found in these proceedings and details at the conference web site: `http://www.umlconference.org/`.

We would like to express our deepest appreciation to the authors of submitted papers, tutorials, workshops, and panels, and to the program committee members who did an outstanding job in selecting the very best papers for presentation. We would also like to thank Jon Whittle who chaired the workshop and tutorial submissions, as well as Michael Jackson, Bran Selic, and David Garlan for agreeing to present invited talks at the conference.

Philippe Lecler and Marie-Noëlle Georgeault at INRIA are thanked for their contribution in organizing and handling the electronic submission process. The ConfMan program (`http://confman.unik.no/~confman/ConfMan/`) was used to gather and organize submitted papers and reviews. Damien Pollet at the University of Rennes organized the preparation of the final version of the conference proceedings. Birgit Demuth, Rüdiger Liskowksy, Klaus Meißner, Ramona Behling, and Daniel Richter from the Technical University of Dresden did an excellent job of managing all local organization matters. We would also like to thank the ≪UML≫ steering committee for their advice, Jean-Michel Bruel and Robert France for their work as Publicity Chairs, and last year's program chair, Martin Gogolla, for lots of helpful emails and hints.

July 2002   Jean-Marc Jézéquel
                                                   Heinrich Hussmann
                                                   Stephen Cook

Organization

Executive Committee

General Chair: Stephen Cook (IBM, UK)
Conference Chair: Heinrich Hussmann
                          (Dresden University of Technology, Germany)
Program Chair: Jean-Marc Jézéquel
                          (University of Rennes 1, France)
Tutorial/Workshop Chair: Jon Whittle (QSS/Nasa Ames, USA)

Organizing Team

Publicity Chairs: Jean-Michel Bruel (University of Pau, France),
                          Robert France (Colorado State University, USA)
Program Organization: Marie-Noëlle Georgeault, Philippe Lecler
                          (INRIA, France)
                          Damien Pollet (University of Rennes 1, France)
Local Organization: Birgit Demuth, Rüdiger Liskowsky,
                          Klaus Meißner, Daniel Richter
                          (Dresden University of Technology, Germany)

Program Committee

C. Atkinson, Germany
J. Bézivin, France
M. Boger, Germany
D. Bustard, UK
J. Castro, Brazil
B. Cheng, USA
S. Cranefield, New Zealand
J. Daniels, UK
G. Engels, Germany
A. Evans, UK
R. France, USA
S. Gérard, France
M. Gogolla, Germany
B. Henderson-Sellers, Australia
P. Hruby, Denmark
S. Kent, UK

H. Kilov, USA
C. Kobryn, USA
H. Miyazaki, Japan
R. Mitchell, USA
A. Moreira, Portugal
P.-A. Muller, France
J. Mylopoulos, Canada
G. Oevergaard, Sweden
G. Reggio, Italy
B. Rumpe, Germany
A. Schuerr, Germany
K. Siau, USA
A. Strohmeier, Switzerland
J. Warmer, The Netherlands
J. Whittle, USA
A. Wills, UK

Sponsors

ACM Special Interest Group
on Software Engineering
`http://www.acm.org/sigsoft`

IEEE Computer Society
`http://www.computer.org`

Corporate Donors

ObjectFab GmbH
`http://www.objectfab.de`

International Business Machines
`http://www.ibm.com`

SQL GmbH Dresden
`http://www.sql-gmbh.de`

Sybase GmbH
`http://www.sybase.de`

Academic Supporters

Technische Universität Dresden
`http://www.tu-dresden.de`

Institut National de Recherche
en Informatique et en Automatique
`http://www.inria.fr`

Université de Rennes 1
`http://www.univ-rennes1.fr`