General Information
Date: Tuesday, October 25 2005
Duration: 2.00 pm – 5.00 pm

Motivation
Eight years after its standardization in 1997, UML has been accepted world wide as the »lingua franca« in software modeling for both developers and customers. This success of a single modeling language allows for an effective and efficient communication about software models, thus preventing unfruitful discussions concerning the meaning of certain graphical symbols such as circles or »crows feet« formerly used in different modeling notations. UML in the current version 2.0 goes one step further promising, among others, to provide a basis for model-driven development and (semi-) automatic code generation.

Objective
The objective of this tutorial is to give insights into the major changes of the new UML2 standard by pointing out improvements, reporting shortcomings, and discussing flaws.

This tutorial will allow the participants to
- obtain a big picture of the goals and overall changes of UML 2
- grasp origin, purpose and usage areas of new diagram types and language concepts for structural and behavioural modeling
- assess the potential of UML 2, thus facilitating the process of migrating to UML 2
- get familiar with the new underlying language architecture and the changes concerning its extension mechanisms and meta modeling capabilities
- gain insight into the potential and limits of model-driven software development on the basis of UML 2 and MOF

Preliminary Outline
(1) Goals and promises of UML 2
(2) Overview of major changes
(3) Evaluation of new concepts
  - in structural modeling
  - in behavioural modeling
  - in the language architecture
(4) Does UML 2 meet its goals and keep its promises?
Related Topics of the Conference
- Metadata, their interpretation and usage
- Design methodologies and languages and their evaluation (UML, XML, RDF, OWL etc.)
- Enterprise and business process modeling
- Standardization

Level of the Tutorial
Intermediate/Advanced

Intended Audience / Prerequisites
- Teachers, researchers and students from the area of object-oriented modeling and model engineering
- Industry members from the area of software development, system analysis as well as business process management
- General knowledge about UML 1.x is required

Instructors’ Profile

Martin Hitz is a full professor of informatics at the Department of Informatics Systems at the University of Klagenfurt, Austria. He received his MS and PhD degrees in computer science from Vienna University of Technology in 1982 and 1989, respectively. From 1988 to 1991 he was a research fellow at Politecnico di Milano and at the University of Ottawa. He is currently heading the Interactive Systems Group in his department and is teaching object-oriented software development and HCI. His research interests are platform independent user interfaces (especially w.r.t. e-learning systems), context sensitive Web based information systems, as well as HCI in general.

Gerti Kappel is a full professor at the Institute of Software Technology and Interactive Systems at the Vienna University of Technology, heading the Business Informatics Group. Until 2001, she was a full professor of computer science and head of the Department of Information Systems at the Johannes Kepler University of Linz. She received the Ms and PhD degrees in computer science and business informatics from the University of Vienna and Vienna University of Technology in 1984 and 1987, respectively. From 1987 to 1989 she was a visiting researcher at Centre Universitaire d'Informatique, Geneva, Switzerland. Her current research interests include object-oriented modeling, database/Web integration, ubiquitous Web technologies, Web engineering, as well as model engineering.

Elisabeth Kapsammer studied business informatics at the Johannes Kepler University (JKU) Linz, Austria. She received the MS and PhD degrees from the Faculty of Business, Economics and Social Sciences of the JKU in 1994 and 1999, respectively. From 1993 to 1998 she was affiliated with the FAW (Research Institute for Applied Knowledge Processing) in Hagenberg, Austria, as project manager and senior researcher in a series of national and international research and industry projects. Since 1999 she is senior researcher at the Department of Information Systems of the JKU. Her current research interests comprise object-oriented modeling, integration of relational database systems and XML, database/Web integration, as well as model engineering.

Werner Retschitzegger studied business informatics at the Johannes Kepler University (JKU) Linz, Austria. He received the MS (1991) and PhD (1996) degrees from the Faculty of Business, Economics and Social Sciences and his habilitation (Venia Docendi) for applied computer science from the Faculty of Natural Sciences and Engineering of JKU. From 1990 to 1993 he has been working for the Research Institute for Applied Knowledge Processing in Hagenberg, Austria, being involved in various national and international industrial and research projects. Since 1993, he is affiliated with the Department of Information Systems at JKU. In 2002, he was appointed to a temporary full professorship for business informatics at the Vienna University of Technology. Currently, he chairs the Institute of Bioinformatics at JKU. His current research interests comprise the integration of database and Web technology and its application to e-commerce, ubiquitous Web applications, model engineering, and Web engineering.
References