

# Preface

CAiSE 2004 was the 16<sup>th</sup> in the series of International Conferences on Advanced Information Systems Engineering. In the year 2004 the conference was hosted by the Faculty of Computer Science and Information Technology, Riga Technical University, Latvia.

Since the late 1980s, the CAiSE conferences have provided a forum for the presentation and exchange of research results and practical experiences within the field of Information Systems Engineering. The conference theme of CAiSE 2004 was Knowledge and Model Driven Information Systems Engineering for Networked Organizations.

Modern businesses and IT systems are facing an ever more complex environment characterized by openness, variety, and change. Organizations are becoming less self-sufficient and increasingly dependent on business partners and other actors. These trends call for openness of business as well as IT systems, i.e. the ability to connect and interoperate with other systems. Furthermore, organizations are experiencing ever more variety in their business, in all conceivable dimensions. The different competencies required by the workforce are multiplying. In the same way, the variety in technology is overwhelming with a multitude of languages, platforms, devices, standards, and products. Moreover, organizations need to manage an environment that is constantly changing and where lead times, product life cycles, and partner relationships are shortening. The demand of having to constantly adapt IT to changing technologies and business practices has resulted in the birth of new ideas which may have a profound impact on the information systems engineering practices in future years, such as autonomic computing, component and services marketplaces and dynamically generated software.

These trends pose a number of challenges to both the operational systems and the development processes of the organization, its work practice, and its IT systems. In order to cope with increasingly complex business and IT environments, organizations need effective instruments for managing their knowledge about these environments. Essential among these instruments are models, i.e. representations of aspects of reality including the domain of work, the processes, and the context. Models come in a variety of forms, formal or informal; describing static or dynamic aspects; representing agents, processes, or resources; focusing on business or IT aspects, etc. To realize the full potential of models, there is a need for a business and technology architecture as well as a way of working that places the models firmly in the center and lets them be the driving force in analysis, design, implementation, deployment and use of systems and services. This implies developing not only new modeling languages but also new ways of developing models, which incorporate in a participatory manner all stakeholders involved.

The challenging theme of CAiSE 2004 attracted scientists from all over the world to submit their contributions. The total number of submissions was 160, out of which the program committee selected 39 top-quality papers. The resulting program reflects the fact that the topic of information systems engineering encompasses human and organizational issues as well as technical issues. In addition to the main program, 16 papers presenting emerging ideas were invited to the CAiSE Forum. The CAiSE Forum was initiated by the organizers of CAiSE 2003 in Velden as a means of stimulating scientific debate.

The success of the CAiSE conferences is shown by the large number of co-located events. CAiSE 2004 was accompanied by eleven workshops and four tutorials, which attracted a large number of participants. The tutorials were given by Scott Ambler (Canada), Brian Henderson-Sellers (Australia) and Dov Dori (Israel). In addition, the Sixth International Baltic Conference on Databases and Information Systems was co-located with CAiSE 2004.

We devote a special thanks to the members of the program committee for providing excellent reviews of the submitted papers. Their dedicated work was instrumental in putting together yet another high-quality CAiSE conference. We wish also to give special thanks to the local organizers at the Riga Technical University for their hard work and devotion, which made the conference a great success.

The CAiSE 2004 organizers would also like to thank the conference sponsors – the Latvian Council of Science, the Dati Group (Latvia), Tieto Enator (Latvia), Lattelekom (Latvia), and the SISU Foundation (Sweden).

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