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Proceedings



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Preface

CAiSE*99 is the 11th in the series of International Conferences on Advanced Information Systems Engineering. The aim of the CAiSE series is to give researchers and professionals from universities, research, industry, and public administration the opportunity to meet annually to discuss evolving research issues and applications in the field of information systems engineering; also to assist young researchers and doctoral students in establishing relationships with senior scientists in their areas of interest.

Starting from a Scandinavian origin in the late 1980's, CAiSE has evolved into a truly international conference with a worldwide author and attendance list. The CAiSE*99 program listed contributions from 19 countries, from four continents! These contributions, 27 full papers, 12 short research papers, six workshops, and four tutorials, were carefully selected from a total of 168 submissions by the international program committee.

A special theme of CAiSE*99 was 'Component-based information systems engineering'. Component-based approaches mark the maturity of any engineering discipline. However, transferring this idea to the complex and diverse world of information systems has proven more difficult than expected. Despite numerous proposals from object-oriented programming, design patterns and frameworks, customizable reference models and standard software, requirements engineering and business re-engineering, web-based systems, data reduction strategies, knowledge management, and modularized education, the question of how to make component-oriented approaches actually work in information systems remains wide open.

CAiSE*99 addressed these issues through invited talks and panels by business and research leaders. The invited talks, held by two of the most influential researcher-entrepreneurs, represent two key trends in information systems engineering, towards object model standardization and towards business domain model standardization. Ivar Jacobson (Rational Software Inc.) reviewed the Unified Process of Component-Based Development, filling a sorely felt gap in the Unified Modelling Language (UML) standardization effort. August-Wilhelm Scheer (Universität des Saarlandes and IDS Prof. Scheer GmbH) investigated the way-of-working leading from business process models to application systems. These talks were complemented by a high-level interdisciplinary panel on Component-Based Information Systems Architectures.

More details on the conference theme were provided by two full-day tutorials on component-based development and on the impact of the Unified Modeling Language. Additional mini-tutorials during the conference itself addressed the emerging questions of advanced workflow systems and infrastructure for electronic commerce.

CAiSE*99 was held in Heidelberg, Germany, not only a beautiful site with the oldest university in Germany, but also close to numerous leading Information

Systems Engineering companies in the Rhein-Main-Neckar area, just an hour away from Frankfurt airport. The touristic attraction of the area dates back 500 000 years – the oldest human bones ever found in Europe belong to ‘Homo Heidelbergensis’! More recent Heidelberg features include the historic student town with the biggest wooden wine barrel in the world as well as the historic student dungeon for those who had too much of the contents.

Besides summaries of the invited talks, this proceedings volume includes the research papers accepted as long or short papers for the conference. Topics addressed include:

- components, workflows, method engineering, and process modeling
- data warehousing, distributed and heterogeneous information systems
- temporal information systems and information systems dynamics.

Associated pre-conference workshops covered Data Warehousing, Method Evaluation, Agent-Oriented Information Systems, Business Process Architectures, and Requirements Engineering. Papers from these workshops could not be included in these proceedings but are available through the workshop organizers (for more information, consult the web site <http://www-i5.informatik.rwth-aachen.de/conf/caise99/>).

We would like to thank all the institutions and individuals who have made this conference possible, especially our General Chair Wolfried Stucky, the workshop and tutorial co-chairs Gottfried Vossen and Klaus Pohl as well as the CAiSE advisory committee led by Janis Bubenko and Arne Solvberg. Several sponsors and supporters from industry made substantial contributions to the success of the conference. Thanks are also due to all the submitters of papers, tutorials, workshops, and last but not least to our co-workers Kirsten Lenz, Stefan Sklorz, and Irene Wicke without whom the organization would hardly have been possible. Stefan Sklorz also served as Technical Editor of this proceedings volume.

March 1999
Aachen and Frankfurt

Matthias Jarke and Andreas Oberweis

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5th International Workshop on Requirements Engineering: Foundation for Software Quality (REFSQ'99)

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