

# Preface

The objective of the workshops associated with ER 2001, the 20th International Conference on Conceptual Modeling, was to give participants the opportunity to present and discuss emerging hot topics, thus adding new perspectives to conceptual modeling. This, the 20th ER conference, the first of the 21st century, was also the first one in Japan. The conference was held on November 27-30, 2001 at Yokohama National University with 192 participants from 31 countries. ER 2001 encompasses the entire spectrum of conceptual modeling, from theoretical aspects to implementations, including fundamentals, applications, and software engineering. In particular, ER 2001 emphasized e-business and reengineering. To meet this objective, we selected the following four topics and planned four international workshops:

- International Workshop on Conceptual Modeling of Human/Organizational/Social Aspects of Manufacturing Activities (HUMACS 2001)

Manufacturing enterprises have to confront a host of demands. The competitive climate, enhanced by communication and knowledge sharing, will require increasingly rapid responses to market forces. Customer demands for higher quality, better services, and lower cost will force manufacturers to reach new levels of flexibility and adaptability. Sophisticated customers will demand products customized to meet their needs. Industries have so far sought to cope with these challenges primarily through advances in traditional capital by installing more powerful hardware and software technology. Attention to the role of humans combined with organizational and social schemes in manufacturing has only been marginal.

The workshop HUMACS 2001 aimed to challenge the relevance of this last point. The basis for competition will be creativity and innovation in all aspects of manufacturing enterprises. This will emphasize on the one hand the importance of knowledge and knowledge processing in organizations. It will necessarily shed light on the need for establishing such working environments as will give full play to the abilities of individuals by ensuring human dignities that have often been damaged by mere pursuit of efficiency in modernized manufacturing systems. The objective of this workshop was to exchange information on recent advances in information modeling, simulation, and database design centered on human / organizational / social aspects of manufacturing activities as a challenge to address issues on human factors in relation to working environments and organizations encountered in the design and operation of manufacturing systems.

- International Workshop on Data Semantics in Web Information Systems: DASWIS 2001

Information systems are rapidly being influenced by web technologies and are driven by their growth and proliferation to create next generation web information systems. A major issue that crops up is the conceptualization of the symbiotic relationship between the old economy based client server information systems and the new economy driven web information systems. Most of this symbiotic relationship

is hidden in the data transformation and routing that takes place in the middle-ware connecting the databases used for transaction processing in the old economy to (web) data warehouses that are also needed to support on-line analytical processing in the new economy.

The processing of data across these disparate systems is hidden in the loosely coupled applications that support the business processes. This motivates the need to extract the semantics of the underlying data and its processing, and make it explicit. Further, the new economy is triggering the manifestation of applied technologies such as, workflow systems, multiagent-based information systems, and home automation systems. Moreover, agent technologies are being used to provide information management support by facilitating cooperative information processing across information systems of old and new economies.

The focus of this workshop is on the modeling of data semantics for facilitating data dissemination and use, secure access, and modification and transfer of data, and conceptual modeling and design of next generation web information systems.

– 2nd International Workshop on Conceptual Modeling Approaches for e-Business: eCOMO 2001

The network economy comes with new challenges for information systems developers and users. They will have to supply and to adopt web-based services which will go far beyond the actual solutions for B2B (business to business) and B2C (business to commerce). Conceptual modeling plays an important role within this context. For example, standardized process models and methodological means are needed for the coupling and de-coupling of (heterogeneous) information systems, as is needed for an enhanced formation of virtual enterprises and dynamic enterprise networks, or for the transition from conventional business processes to globalized e-Business.

eCOMO 2001 was the continuation of a highly successful first workshop which was held during ER 2000 in Salt Lake City. Experts from practice and academia were cordially invited to exchange and discuss actual developments, methods and tools, as well as their experiences in using these. Thus, the workshop contributed to intensifying research within that domain and to determining directions for future research.

– DAMA 2001 International Workshop: Global Data Modeling in the New Millennium

This was an exciting opportunity for DAMA International to gain wider international visibility and to exchange experiences with an international audience.

Within the topic of Data Modeling lies a vast array of real-life global factors based on approach, method, and design interpretation. From the theoretical foundations to database implementation strategies, there are tangible and meaningful lessons to be learned in following different methods to reach a global view. Knowing which method to use based on the needs of the business environment and detailed specifications will affect the globalization of the requirements. Whether modeled for a business or personal environment, all methods entail life long learning experiences for the international client, user, and implementers.

The DAMA International sponsored workshop, addresses topics exploring the global impact of the Data Model, and its cause and affect within various industry expe-

riences. How do we really embody conceptualization and/or theory and share this interpretation globally? What happens when we use one method versus another? What would have been the cause and affect if we had skipped a particular process path, or used another method or approach? What would we do differently to handle global standards? How did we make the data model real and tangible to the global user, developer, and/or consumer?

Emphasis is placed on international speakers from different countries that can provide a wide variety of experiences with internationalization of data modeling.

Following the philosophy of the ER workshops, the call for papers and selection of contributions were done very carefully by each workshop program committee in order to guarantee an excellent workshop program. This book contains selected workshop papers, which were presented in one of the workshop sessions and revised by the authors following the discussions held during the conference. (However, we were only able to include one paper from the DAMA workshop, as many of the presentations were given without a technical paper.) We are deeply indebted to the authors and to the members of the program committee, whose work resulted in this outstanding program. We acknowledge the hard work of the many individuals who made these workshops a great success.

We would like to express special appreciation to Mr. Yoshioki Ishii, the ER 2001 Conference Chair.

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