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Preface

The design of complex artifacts and systems requires the cooperation of multidisciplinary design teams using multiple commercial and non-commercial engineering tools such as CAD tools, modeling, simulation and optimization software, engineering databases, and knowledge-based systems. Individuals or individual groups of multidisciplinary design teams usually work in parallel and separately with various engineering tools, which are located on different sites, often for quite a long time. At any moment, individual members may be working on different versions of a design or viewing the design from various perspectives, at different levels of detail.

In order to meet these requirements, it is necessary to have effective and efficient collaborative design environments. These environments should not only automate individual tasks, in the manner of traditional computer-aided engineering tools, but also enable individual members to share information, collaborate and coordinate their activities within the context of a design project. CSCW (computer-supported cooperative work) in design is concerned with the development of such environments.

A series of international workshops and conferences on CSCW in design started in 1996. The primary goal of these workshops/conferences is to provide a forum for the latest ideas and results on the theories and applications of CSCW in design, research of multi-agent systems, Internet- and Web- based applications, electronic commerce and other related topics. It also aims at promoting international scientific information exchange among scholars, experts, researchers and developers in the field of CSCW in design. The major topics of CSCWD workshops/conferences include:

- techniques, methods, and tools for CSCW in design;
- social organization of the computer-supported cooperative process;
- knowledge-intensive cooperative design;
- intelligent agents and multi-agent systems for cooperative design;
- workflows for cooperative design;
- VR technologies for cooperative design;
- Internet/Web and CSCW in design;
- Grids, Web services and Semantic Web for CSCW in design;
- CSCW in design and manufacturing
- cooperation in virtual enterprises and e-businesses;
- distance learning/training related to design;
- applications and testbeds.

Since this is the first book on CSCW in design in the series of Lecture Notes in Computer Science (LNCS), we would like to provide a little more background information about the history of the CSCWD workshops/conferences. The University of Technology of Compiègne in France and the Institute of Computing Technology of the Chinese Academy of Sciences started an international collaborative project in the area of CSCW in design in 1993. Based on this collaboration, the 1st International Workshop on CSCW in design (CSCWD 1996) was held on May 8–11, 1996 in Beijing, China and the second one (CSCWD 1997) was held on November 26–28, 1997, in Bangkok, Thailand. After the two successful workshops, an international working group on CSCW in Design was created and an International Steering
Committee was formed in 1998 (http://www.cscwid.org). The Steering Committee then coordinated two workshops (CSCWD 1998 on July 15–18, 1998 in Tokyo, Japan and CSCWD 1999 on September 29–October 1, 1999 in Compiègne, France). During the annual Steering Committee meeting held at CSCWD 1999, the International Steering Committee decided to change the name from the “International Workshop on CSCW in Design” to the “International Conference on CSCW in Design”. The 5th International Conference on CSCW in Design (CSCWD 2000) was then held on November 29–December 1, 2000 in Hong Kong, China, followed by CSCWD 2001 on July 12–14, 2001 in London, Ontario, Canada and CSCWD 2002 on September 25–27, 2002 in Rio de Janeiro, Brazil.

The 8th International Conference on CSCW in Design (CSCWD 2003) was scheduled to be held on October 22–24, 2003 in Xiamen, China. Due to the outbreak of SARS early in 2003, the conference was rescheduled for May 26–28, 2004 (as CSCWD 2004). Two volumes of conference proceedings were published: Volume 1 in 2003 with 134 papers selected from 170 submissions and Volume 2 in 2004 with 148 papers selected from 188 submissions. This book includes 45 articles that are the expanded versions of the papers presented at CSCWD 2004.

Many people contributed to the preparation and organization of CSCWD 2003 / CSCWD 2004. We would like to thank all Program Committee members for their efforts in promoting the conference and carefully reviewing the submitted papers, as well as the authors who contributed to the conference.

We would also like to thank the chairs and members of the Organizing Committee for taking care of all the details that made CSCWD 2004 successful. We acknowledge the sponsorship of Xiamen University, China and the co-sponsorship of the IEEE Beijing Section, the CIMS Committee of the National Hi-Tech R&D Program of China, the China Computer Federation, the National Natural Science Foundation of China, Zhongshan University, China, and Fuzhou University, China.

Special thanks to Prof. Wenhua Zeng, Prof. Shaozhi Li, Prof. Chenhui Yang, Zhongpan Qiu, Dandan Liu, Youzhun Xu, Xinzhen Xu, and Xiaosu Zhan who made significant contributions to the preparation of the conference and the editing of the conference proceedings.

July 2005

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Zongkai Lin
Jean-Paul Barthèse
Tangqiu Li
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