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Web Engineering and Peer-to-Peer Computing

NETWORKING 2002 Workshops
Pisa, Italy, May 19-24, 2002
Revised Papers

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Volume Editors

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Preface

This book constitutes the refereed proceedings of the two thematic workshops held jointly with Networking 2002: WEB Engineering and Peer-to-Peer Computing.
Networking 2002 was organized by the Italian National Research Council (CNR) and was sponsored by the IFIP working groups WG 6.2 (Network and Internetwork Architectures), WG 6.3 (Performance of Communication Systems), and WG 6.8 (Wireless Communications). The program of the conference covered five days and included the main conference (three days), two tutorial days, and one day of thematic workshops.

The International Workshop on Web Engineering was dedicated to the discussion of the principal issues that emerge in the design and implementation of large-scale, complex, Web-based systems. Scalability issues pose a number of challenging problems to solve for both applications and the underlying web/network infrastructure. On one hand, web services and internet applications must take into account network performance and transport protocol design, to achieve acceptable performance and robustness. On the other hand, emerging network and Web technologies are determined by the requirements of these applications.

Fifteen papers were presented that illustrated the current state of the art in this area.

In addition to the authors of these papers, the Workshop on Web Engineering was attended by about thirty participants, who contributed to the workshop by stimulating fruitful discussions at the end of each presentation. Thus, this workshop provided a excellent opportunity for researchers, from both industry and academia, to gather, exchange ideas, and discuss recent results in the development of Web-based systems and emerging Internet applications.

The aim of the International Workshop on Peer-to-Peer Computing was to bring together researchers and practitioners active in the field of peer-to-peer computing with the goal of identifying the core open research issues, and defining the research agenda for the next generation of peer-to-peer systems.

The peer-to-peer paradigm of communication is not new to researchers, who have adopted it for years. As an example, most Internet network protocols are based on this model, which results in highly adaptive systems. In the last few years, however, the peer-to-peer paradigm has gained popularity at the application level, thanks to the emergence of file sharing applications over the Internet. Napster, Gnutella, and Freenet are examples of applications that enable users to share information residing on their own machine with other connected peers by exploiting an overlay network. The interest in the opportunities opened up by this paradigm has been so great that many have already welcomed the birth of "the next Internet".

The workshop received 26 submissions from all over the world. Each paper was assigned three reviewers drawn from the Program Committee, composed of researchers actively involved in peer-to-peer computing. In the end, ten regular papers and six short/position papers were accepted. The workshop program was organized in four sessions: routing and discovery, applications, programming models, and security.

The workshops on Web Engineering and on Peer-to-Peer Computing would not have been possible without the enthusiastic and hard work of a number of colleagues. A special thanks to the TPC members, and all the referees, for their invaluable help in reviewing papers for the workshops. Finally we would like to thank all the authors that submitted their papers to this conference for their interest.

We are also indebted to our supporters. First of all CNR. CNR not only gave Enrico Gregori enough time to organize this event during the year leading up to the workshops, but also financially supported the event through sponsorship by the CNUCE and IIT institutes. A special thanks to Telecom Italia for joining us in the organization of this event. We are also indebted to our corporate sponsors (Cassa di Risparmio di Pisa, Compaq, Microsoft, Provincia di Pisa, and Softech) whose help removed much of the financial uncertainty and who also provided interesting suggestions for the program.

July 2002

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