

Peer-2-Peer Ecommerce Systems and Applications

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The purpose of this minitrack is to provide a forum for researchers and practitioners to discuss all aspects of the emerging Peer-2-Peer paradigm. Peer-to-peer architectures are characterized by the decentralization and the total autonomy of the interacting systems. As a result, this has enabled a new distributed computing environment paradigm, which requires the development of new computing approaches and patterns of interaction.

The Peer-2-Peer computing paradigm has been receiving increasing attention from the computer science and open source communities as well as from the business and entertainment communities. In our minitrack last year, the focus was on the rapid development of the Internet and its impact on the traditional IT infrastructures. Is the Internet simply a new communication channel between components of a distributed system or does it fundamentally alter the conceptual design of the underlying systems? Does it provide opportunities to design novel IT architectures, which can support new organizational forms and flexible ways of conducting businesses? What are its effects on the reengineering of business and workflow processes? Some answers to these questions have begun to percolate in many research communities. Evidence shows that Peer-2-Peer computing represents a natural extension or mapping of the Internet protocols to a computing environment characterized by decentralization and autonomy of its interacting nodes. Spurred by initiatives in the open source community and information sharing networks, this paradigm has attracted substantial attention also from the industry, opening several avenues for researchers, practitioners and technology providers alike. This minitrack is intended to take stock of some of these new developments.

The minitrack presents five papers covering several key issues in Peer-2-Peer computing. They demonstrate that the Peer-2-Peer paradigm is proving increasingly to be suitable to the development of applications in Ecommerce and Ebusiness Systems. The key issues addressed in the contributions are business integration architectures based on message based communications and security issues in Peer-2-Peer environments.

The first paper "P2P in B2BI" by Bussler addresses the issue of business-to-business integration and the corresponding application integration issue based on Peer-2-Peer interactions.

The second paper "Participation Incentive Mechanisms in Peer-to-Peer Subscription Systems" by Lui, Lang and Kwok discusses the issue of how to avoid freeriding in Peer-2-Peer systems and presents possible solutions based on psychology theories.

The third paper "Transformational Interactions for P2P-Ecommerce" by Kum, Karp and Lemon presents a system for composing protocols in Peer-2-Peer E-Commerce environments.

The fourth paper "Security Issues and Requirements for Internet Scale Publish-Subscribe Systems" by Wang, Carzaniga, Evans and Wolf investigates security issues and requirements in the scope of large scale publish subscribe systems.

Finally, the fifth paper "A Secure Platform for Peer-to-Peer Computing in the Internet" by Kim, Graupner and Sahai discusses the E-Speak approach and infrastructure as a secure and scalable platform for Peer-2-Peer applications.

We hope this minitrack will provide the basis for productive discussions on many aspects of Peer-2-Peer computing and related issues.

We also take this opportunity to thank all the authors for their submissions and all the reviewers for their valuable and professional work.