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## Editorial

The advance of digital technologies has dramatically changed the way of doing business. Many companies today tie their relationship between the partners through the use of these technologies. The level of collaboration has moved from buy-and-sell to planning, designing, developing, researching, and service. This form of collaboration is called “collaborative commerce.” Collaborative commerce integrates business processes (such as engineering [1], design [8], product development [4], supply chain management [3], customer relationship management [5], workflow support [6], knowledge sharing [9], learning [7], etc.) between partners through sharing information electronically. Moreover, collaborative commerce is a set of techniques to allow companies to maintain better relationship with their trading partners through automating their cross-enterprise process logic, rules, heuristic and workflow.

Based on the survey of over 300 business executives by Deloitte Research in mid-2002 [2], many executives are now targeting collaborative commerce as a strategy for gaining competitive advantage and as a way to lessen many of the uncertainties of today’s business environment. The report also shows that collaborative commerce leads to better business operations and information exchange providing 70% higher profitability for those companies who adopted the technology than those who did not integrate with trading partners. This may be because the integrated environment can enhance value chain of suppliers, business partners, customers and employees through flexible business processes, better product quality, rapid fulfillment improved reliability, improved capital efficiency, timely information exchange and knowledge sharing.

There are many emerging issues facing the collaborative commerce community. The purpose of this special issue is to engender healthy discussion on some of these issues. After our initial screening, 48 out of 96 submitted papers were chosen for the double-blind review process. With the help of over 100 reviewers, nine quality papers are selected to be included in this issue. The selected papers cover several important issues, such as Web service technology, P2P network, bargaining strategies, interaction technology, trust and reputation, costs and benefits, vendor-managed inventory, and access control.

In the first paper, ‘Empowering collaborative commerce with Web services enabled business process management systems,’ Professor Minder Chen and his colleagues propose a framework for Web services for collaborative commerce and the implementation of a dynamic e-procurement application to demonstrate why Web services can enhance business process coordination.

In the second paper, ‘Service-based P2P overlay network for collaborative problem solving,’ Professor Sanjay Goel and his colleagues extend the Web service to encompass a P2P overlay network architecture in which peers interact directly to perform specific tasks, rather than use an intermediary to facilitate all communication. The architecture is used to support a collaborative environment for the solution of complex business processes over a P2P network.

In the third paper, ‘Bargaining for cooperative economic ordering,’ Professor Stefan Minner uses bargaining concepts to analyze short-term and long-term cooperation between organizations that replen-

ish material requirements. The context used in this study is the economic order quantity model. Collaboration is analyzed by using bargaining concepts from non-cooperative and cooperative game theory.

In the fourth paper, 'Interaction technology: Speech-act based information technology support for building collaborative relationships and trust,' Professors Kuldeep Kumar and Irma Becerra-Fernandez use speech-act theory and closed-loop cycles to develop a framework for understanding trust and the trust building process. The experiments in this framework show how the use of software tools contributes to a greater level of satisfaction.

In the fifth paper, 'Trust and technologies: Implications for organizational work practices,' Professors Melanie J. Ashleigh and Joe Nandhakumar adopt the repertory grid methodology as an interview-based technique to elicit thirteen key constructs of trust that are essential for team work.

In the sixth paper, 'A survey of trust and reputation systems for online service provision,' Professor Audun Jøsang and his colleagues give an overview of reputation systems and propose a system that can be used to derive measures of trust and reputation for Internet transactions.

In the seventh paper, 'Simulating Internet-based collaboration: A cost-benefit case study using a multi-agent model,' Professors Te-Wei Wang and Suresh K. Tadisina provide a case study of the utilization of multi-agent simulations to support IT investment decisions.

In the eighth paper, 'Supply chain integration in vendor-managed inventory,' Professor Yuliang Yao and his colleagues use an analytical model to explore how important supply chain parameters affect the cost savings that can be realized from collaborative initiatives such as vendor-managed inventory (VMI).

In the last paper, 'Access control in collaborative commerce,' Professor Eldon Y. Li and his colleagues consider the format of corporate collaboration and address the conflicts between the access control policies of interfaces. They propose some general guidelines, other than those that relate to minimum privilege on duty and maximum

privilege on sharing, for setting up multilevel access policies.

Finally, we would like to thank Professor Andy Whinston, Editor-in-Chief of *Decision Support Systems*, who has provided strong support for this special issue. We are much honored to be the guest editors of this special issue. Special thanks go to Veronika for her patience in the editing process. To all the staffers in the editorial office and Elsevier, we deeply appreciate their support in the production process. Our most sincere thanks go to all the authors who contributed their works to this special issue. Without them, this special issue would not be possible. We also want to thank all the reviewers for their effort and valuable comments that uphold the quality of the publication. Most of all, to all readers around the world, we hope the papers included in this special issue would help you significantly in finding the direction and formulating the strategy of your research effort.

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