

Editorial: special issue on WeB 2006

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This ISeB special issue on e-business is based on a selected set of best papers presented in the Fifth International Workshop on e-Business (WeB), an International Conference on Information Systems (ICIS) workshop event held in Milwaukee, WI, in December 2006, with main sponsorship from the AIS Special Interest Group on E-Business.

The papers in this special issue provide a snapshot of the rapidly growing e-business research literature from the Information Systems community. New advances in and applications of Information and Communication Technologies continue to rapidly transform how business is done around the world. An expanding array of Intranet and Internet-based applications is being developed and deployed, spanning across virtually all business functional areas. These e-business technologies and applications are also enabling new business models, creating new industry sectors, and redefining relations and processes within and across organizations. This special issue covers research developing e-commerce technology and studying adoption of such technology in enterprise and inter-organizational applications, as well as in market intermediaries.

The first three papers are based on empirical research methodologies, studying a range of strategic and business operational issues in various e-business application contexts. Zheng and Wang study adoption of e-procurement auctions

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in vertical markets. Online market intermediaries have always been one of the focal points of e-commerce research. Based on data from more than 150 vertical markets, this study sheds new light on the value of online auction mechanisms in complex business applications through investigating the impact of industry contingencies on the adoption of e-auction services. The research findings regarding the impact of sector-specific competitiveness and concentration on auction adoption are refreshing. Geri and Ahituv investigate technology adoption issues in a different setting concerning inter-organizational systems. Their work is based on the Theory of Constraints and delivers useful insights as to main drivers behind an organization's decision to be a partner in an inter-organizational system as well as barriers hindering the adoption of inter-organizational systems. Data collected from close to 140 medium and large Israeli companies have been used to validate their work. The third article by Gebauer, Tang, and Baimai, aims to answer important practical questions concerning business use of mobile technology by focusing on user-perceived system requirements. The authors have identified factors related to overall user evaluation of mobile devices targeting at business users from postings from an online media Website. In addition to concrete findings about mobile technology, this paper also makes interesting observations on the use of automated and manual content analysis techniques on online user reviews as a research tool.

The remaining three papers are design science contributions, focusing on identifying technological challenges in various types of e-business application settings, and designing and evaluating new technical or computational approaches to address these challenges. Sarnikar and Zhao propose a pattern-based knowledge workflow approach to support knowledge sharing in dynamic situations. Their work extends the traditional workflow framework and allows for on-the-fly assembly of knowledge workflow patterns at execution. A business case was presented to illustrate how the proposed approach can be implemented along with an interesting mapping to make their approach Web service compliant. The paper by Sung and Zhou is also related to Web service but its emphasis is on the performance of composite Web services. The current Web service composition literature typically assumes that the component services of a composite Web service are independent of one another. This paper relaxes this assumption by taking into consideration of potential alliance information, in the form of bundled service offerings, between heterogeneous component service providers. The authors have developed an alliance-aware Web service composition approach, and investigated its cost and response-time implications using a multi-agent framework. The last paper in this special issue, by Chou, Sinha, and Zhao, is concerned with applying a text mining approach to detect Internet abuses in workplaces. Their learning-based approach complements the existing practice using commercial software, which is largely based on non-learning methods such as blacklists, whitelists, and keyword matching. A number of term weighting, feature selection, and classification techniques have been experimented using data from a workplace of software programmers. Initial positive results indicate that their proposed approach is promising and could complement the existing Internet filtering techniques.

The guest editors hope that the perspectives, models, technological development, research findings, and empirical findings as presented in this special issue will help encourage exciting new and synergetic e-Business research. We thank all contributing authors and reviewers for their time and effort.