

## Preface

We are pleased to bring you this latest volume of the *Advances in End-User Computing* (EUC) series. Few domains of computing progress at the pace of end-user issues, and research and practice into EUC needs a resource able to provide access to new concepts and applications within the domain. This 2007 Volume of *Advances in End-User Computing* presents a wide range of the most current research into a variety of aspects of EUC, and will assist researchers, educators, and professionals in understanding the most recent developments in the domain. A summary of the contents of the text is given below.

Chapter I, “A Proposed IT Ethical Behavioral Model”, by Timothy Paul Cronan and David E. Douglas, of The University of Arkansas, USA, advances IT ethics research by surveying the literature regarding IT ethical behavior models and proposes an IT ethical behavioral model for further research. A proposed conceptual ethical behavior model is provided, and suggests that ethical behavioral intention is influenced by an individual’s attitude (which in turn is influenced by a variety of other factors such as perceived importance of the issue, consequences of the action and beliefs), as well as other elements from the theory of planned behavior, equity theory, the environment, control, norms, past ethical behavior, and individual characteristics. The authors argue that results from further research in ethical behavior will provide a better understanding of unethical behavior and inappropriate acts allowing organizations to develop realistic training programs for IT professionals, users, and managers as well as incorporate effective deterrent and preventive measures that can curb the rising tide of undesired misuse and unethical behavior in the IT arena.

Chapter II, “Understanding the Impact of Household End Users’ Privacy and Risk Perceptions on Online Behaviour”, by Judy Drennan and Josephine Previte of Queensland University of Technology, Australia, and Gillian Sullivan Mort of Griffith University, Australia, reports research concerning privacy, risk perceptions and online behavior intentions on a sample of expert household end users. Findings include identification of an e-privacy typology, and an e-privacy hierarchy of effects. A key finding was that privacy active behavior which was hypothesized to increase the likelihood of online subscription and purchasing was not found to be significant. The chapter concludes with a number of important implications for managers, and directions for future research are discussed.

Chapter III, “The Impact of Multilevel Computer Self-Efficacy on Effectiveness of Computer Training”, is by Bassam Hasan, The University of Toledo, USA. Bassam argues that identifying factors affecting the effectiveness of computer training remains a key issue in information systems (IS) research and practice. His study builds upon IS and training literature to develop and test a research model to examine the impact of multilevel computer self-efficacy (CSE) on effectiveness of computer training. The model distinguishes between general and application-specific CSE and posits that both levels of CSE will have positive effects on: perceived ease of use, near-transfer learning, and far-transfer learning of computer skills and a negative effect on computer anxiety. The results of a field experiment revealed that general CSE had positive effects on far-transfer learning and perceived ease of use, whereas appli-

cation-specific CSE demonstrated positive effects on near-transfer learning and perceived ease of use. This study provides insights into the relationships between the two levels of CSE and computer training outcomes and offers valuable research and practical implications.

Chapter IV, “Optimizing the ROI of Enterprise Architecture Using Real Options”, by David F. Rico, a computing consultant, illustrates how to optimize the return on investment or ROI of enterprise architecture. Enterprise architecture is a blueprint for defining the structure and operation of organizations, such as local, state, and federal agencies. Done well enterprise architecture results in leaner and more effective information systems that satisfy organizational goals and objectives. This article introduces a suite of simple metrics and models for measuring the ROI of enterprise architecture. This article also introduces real options, which is a contemporary approach to measuring ROI. Whereas, typical measures tend to underestimate ROI, real options have the ability to unearth business value hidden deep within the economics of investments in enterprise architecture.

Chapter V, “An Extension of the Technology Acceptance Model to Determine the Intention to Use Biometric Devices”, is by Tabitha James and Reza Barkhi, Virginia Polytechnic Institute and State University, USA; Taner Pirim, Mississippi Center for Supercomputing Research, USA; Katherine Boswell, Middle Tennessee State University, USA; and Brian Reithel, University of Mississippi, USA. They argue that the protection of physical assets and digital information is of growing importance to society. The study adapts the technology acceptance model and extends it to study the intention to use security devices, more specifically biometrics, across a wide variety of organizational contexts. Through the use of vignettes, this study encompasses a systematically varied set of usage contexts for biometric devices to provide a generalizable view of the factors impacting intention to use over all categories of situational contexts of the device’s use. The technology acceptance model is extended in this study to include constructs for perceived need for privacy, perceived need for security, and perceived physical invasiveness of biometric devices as factors that influence intention to use. The model is shown to be a good predictor of intention to use biometric devices and implications of the results for biometric and security technology acceptance is discussed.

Chapter VI, “Intentions to Use Information Technologies: An Integrative Model”, by Ron Thompson, Wake Forest University, USA, and Deborah Compeau, Chris Higgins, and Nathan Lupton, University of Western Ontario, Canada, presents an integrative model explaining intentions to use an information technology. The primary objective is to obtain a clearer picture of how intentions are formed, and it draws on previous research. The conceptual model was tested using questionnaires. The results generally supported the hypothesized relationships, and revealed strong influences of both personal innovativeness and computer self-efficacy.

Chapter VII, “The Organization of End User Development in an Accounting Company”, by Anders I. Mørch and Hege-René Hansen Åsand, University of Oslo, Norway, and Sten R. Ludvigsen, InterMedia, University of Oslo, Norway, uses activity theory as a conceptual analysis framework to analyze real-world tailoring practices in a sophisticated organizational context, explored through a case study where a complex business application is implemented in an accounting company. The organizational context embeds formally defined roles of end users, super users, and application coordinators, and the chapter offers interesting findings regarding the relationships and interactions between these roles, concluding that the role of super users fills an important niche in supporting organization-wide EUD. The analysis in the chapter provides insights into end-user development (EUD) activities with the “Visma Business” system, including the roles created by the Company and those which emerged spontaneously during the process, and information concerning what the various user groups (regular users, super users, and the application coordinator) did, and how EUD was coordinated between super users and the application coordinator. The recommendations of this chapter would benefit other organizations in their EUD efforts.

Chapter VIII, “End User Perceptions of the Benefits and Risks of End User Web Development”, by Tanya McGill and Chris Klisc, Murdoch University, Australia, is concerned with organizational issues of supporting EUD, with a focus on approaches to alleviating risks of EUD. It compares perceptions and opinions regarding risk management within two contexts: end-user development of Web pages with end-user development of spreadsheets. The chapter uses a questionnaire-based survey to gather information regarding practices and perceptions of Web page development among end users. The importance of the Web page development context comes from the external nature of the Web pages as development artifacts, which means that consequences of end-user development are much wider than the conventional EUD activities such as spreadsheet development, and mistakes can affect core business processes involving customers and suppliers. The survey targets end users who are known to have developed spreadsheets, probing the extent to which they undertake Web page development, and using their experience of EUD in both contexts. One interesting finding is that training is perceived to be the most important approach to risk reduction, despite the lack of such training among the survey sample of end-user developers.

Chapter IX, “Advancing End User Development Through Metadesign”, is by Maria Francesca Costabile, Rosa Lanzilotti, and Antonio Piccinno, Università di Bari, Italy; Daniela Fogli, Università di Brescia, Italy; and Piero Mussio and Loredana Parasiliti Provenza, Università di Milano, Italy. This chapter analyzes the richness of working practices, representations, and tacit knowledge found in professional communities, and explores the interactions between these and software tools at the levels of use, design, and metadesign. It proposes the SSW (software shaping workshops) methodology, which focuses on enabling the participation of end users in the development of their software environments to ensure the environment is tuned to their needs. The tools used in everyday work of users are gathered in environments called application workshops, while the tools necessary to design and customize those are gathered in system workshops, and so forth. This contribution is grounded in the medical domain, and a field study of physicians and their activities of customizing their workshops is reported in the chapter.

Chapter X, “Semantic Composition of Web Portal Components”, by Jens H. Weber-Jahnke, Yuri Bychkov, David Dahlem, and Luay Kawasme, University of Victoria, Canada, targets the health care domain, and proposes a novel approach to enabling end-user development of Web portals. Web portals have recently gained importance in information rich and agile domains such as health care. As the size and complexity of portal-based content delivery applications increases, current component-based technologies are no longer suitable because of their significant cognitive overload for end-user developers in terms of type checking, debugging, and complex metaphors. The core innovation reported in the chapter is the use of the semantic-based composition model, achieving integration of ontologies and component-based technology to simplify end-user development in this particular context. The proposed approach is implemented in a tool and evaluated using an application scenario.

Chapter XI, “Privacy Statements as a Means of Uncertainty Reduction in WWW Interactions”, by Irene Pollach, Vienna University of Economics and Business Administration, Austria, analyzes the content of 50 privacy policies from well-known commercial Web sites with a view to identifying starting points for improving the quality of online privacy policies. The study shows that privacy policies often omit essential information and fail to communicate data handling practices in a transparent manner. The results also call for less verbose texts and alternatives to the current narrative presentation format.

Chapter XII, “Examining User Perception of Third-Party Organization Credibility and Trust in an E-Retailer”, is by Robin L. Wakefield, Hankamer School of Business, Baylor University, USA, and Dwayne Whitten, Mays School of Business, Texas A&M University, USA. Despite the fact that over half of U.S. residents are now online, Internet users hesitate to enter into transactions with e-retailers in the absence of certain assurances. The authors extend the research in online trust to include the effect of third-party organization (TPO) credibility on both Internet users’ perceptions of assurance structures

and purchase risk. Findings indicate that TPO credibility is positively related to the value that Internet users assign to assurance structures and negatively related to perceptions of purchase risk. These findings have important implications for the design of Web sites, the selection of assurance providers and services, and the reputation of both e-retailers and providers.

Chapter XIII, “Supporting Distributed Groups with Group Support Systems: A Study of the Effect of Group Leaders and Communication Modes on Group Performance”, is by Youngjin Kim, Fordham University, USA. In this study, the presence of a group leader is found to make a significant difference in objective decision quality and satisfaction with the decision process. At the same time, perceived decision quality and consensus are not significantly different in groups with a leader and those without one. A content analysis of comments by group leaders shows that group leaders are effective when making comments on clear group objectives and interaction structure in the early stages of group interaction. In the later stages, however, it becomes more important for group leaders to offer comments encouraging interaction and maintaining group cohesion.

Chapter XIV, “Evaluating Group Differences in Gender During the Formation of Relationship Quality and Loyalty in ISP Service”, by Chieh-Peng Ling, Vanung University, Taiwan, and Cherng G. Ding, National Chiao Tung University, Taiwan, examines the moderating role of gender during the formation of relationship quality and loyalty in the context of IT service. In the proposed model, expertise, relational selling behavior, perceived network quality, and service recovery indirectly influence a customer’s loyalty through mediation of relationship quality. Test results indicate that the influences of perceived network quality on relationship quality and of relationship quality on loyalty are stronger for males than females, while relational selling behavior influences relationship quality more for females than for males.

Chapter XV, “The Importance of Ease of Use, Usefulness, and Trust to Online Consumers: An Examination of the Technology Acceptance Model with Older Consumers”, by Donna Weaver McCloskey, Widener University, USA, examines electronic commerce participation and attitudes by older Americans. Questionnaires were distributed at a large retirement community and several senior centers located in Pennsylvania. The technology acceptance model (TAM) was used and modified to examine the impact attitudes concerning ease of use, usefulness, and trust had on electronic commerce usage. Usefulness and trust were found to have a positive, direct affect on usage. Ease of use had significant impacts on usefulness and trust had a significant impact on both ease of use and usefulness. The article concludes with a discussion of these results, study limitations, and directions for future research.

Chapter XVI, “End User Computing Ergonomics: Facts or Fads?,” is by Carol Clark, Middle Tennessee State University, USA. Until recent years, the end-user computing ergonomic focus has primarily been on stationary computer use. A new trend for the end user is mobile computing. However, the mobile computing environment introduces a new area of ergonomic concerns. This chapter includes an in-depth review of the current and emerging issues, especially the mobile end user environment, that is important to the end user, manager, and organization as a whole. It also provides end-user ergonomic suggestions and resources and addresses the management challenges rising from ergonomic issues.

## CONCLUSION: CONTRIBUTION TO THE FIELD

The field of end-user computing has grown exponentially in recent years, and continues to expand rapidly. Professionals and educators alike will find that the *Advances in End-User Computing* series provides

a constantly up-to-date resource for understanding and implementing EUC, which will be of value to professors, researchers, scholars, professionals, and all who have an interest in the domain. An outstanding collection of the latest research associated with EUC, the 2008 copyright volume of *Advances in End-User Computing* provides valuable recent thinking from the field.

We hope you enjoy reading it.

*Steve Clarke*

*Editor-in-Chief*

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