Preface

INTRODUCTION

Mobility and ubiquity are among the most important technological and market trends of the 21st Century. The wide deployment of wireless data communication networks and the explosive growth of mobile users have created incredible demand for mobile and ubiquitous commerce applications. For users, these applications can provide unprecedented flexibility and convenience in their professional and personal lives. Mobile devices allow users to work, communicate and transact anywhere/anytime. Ubiquity in mobile services implies that users need not even provide explicit input to communicate their current needs and context.

For companies, mobile and ubiquitous applications provide new opportunities to execute business transactions, interact with trading partners, improve customer service levels, extend brand presence, and enhance collaboration between an increasingly mobile workforce. While existing business models must be re-examined to enable these opportunities, companies also need to understand how to best cope with the burden of being “always on”.

This volume of Advances in Electronic Business intends to stimulate discussion and understanding by presenting theoretical and empirical research on mobile and ubiquitous commerce. Research results and future perspectives are presented for the development and sustainable deployment of anywhere/anytime applications and services. This book is organized into five sections: the first provides an overview of mobility and pervasiveness as well as an emerging key issue of privacy; the second section examines various mobile business models and their applications in private and public sectors; the third section centers on technical considerations for various service models and security/authentication concerns; the fourth section explores individual differences and emotive aspects of interacting with mobile devices; finally, the fifth section provides an international perspective by highlighting mobile issues in Spain and India. Overall, this book helps to provide a roadmap for future scholarship and business success in this critical domain.

BOOK ORGANIZATION

Section I: Overview

Chapter I, For Those About to Tag, provides an overview of Radio-Frequency Identification (RFID) and its impact on creating a pervasive work landscape. Key changes and issues are presented and the author challenges the reader to consider the socio-technical impact of RFID tagging on work practices and the on the nature of mobile work in general.
Chapter II, *Privacy and Location-Based Mobile Services: Finding a Balance*, addresses a central concern with location-based mobile services: privacy. The authors identify and analyze the key privacy issues and present best practices for how to help mitigate some of these growing concerns.

Section II: Mobile Business Models and Applications

Chapter III, *Business Models for Mobile Payment Service Provision and Enabling*, explores business models for mobile payment service provision and mobile payment service enabling. The authors introduce a new mobile payment business model framework, which provides researchers and practitioners an analysis tool for existing and future models.

Chapter IV, *Ubiquitous Communication: Where is the Value Created in the Multi-Play Value Network*, addresses the ubiquitous communication system from both the customer preference and operator strategy perspectives. A framework is outlined that connects customer value preferences to firm resources.

Chapter V, *Predicting the Adoption of Mobile Government Services*, examines mobile government and its potential to transform many traditional governance practices. The authors present and empirically validate the key predictors of mobile government service adoption.

Section III: Technical Considerations for Mobile and Ubiquitous Commerce

Chapter VI, *Towards Mobile Web 2.0-Based Business Methods: Collaborative QoS-Information Sharing for Mobile Service Users*, presents a novel method for a mobile service provider’s quality of service assurance process. The authors explore various business cases, focusing on QoSIS.net, which provides its service based on collaborative-sharing of quality of service information by its users.

Chapter VII, *Strong Authentication for Financial Services: PTDs as a Compromise Between Security and Usability*, outlines the flaws of current authentication systems in the banking sector that tend to rely on single-side client authentication. To address these flaws, the authors propose a system that combines and strengthens web and mobile authentication while preserving usability for the end user.

Chapter VIII, *Mobile Signature Solutions for Guaranteeing Non-Repudiation in Mobile Business and Mobile Commerce*, examines various mobile signature solutions, outlining their security and legal implications. Readers are provided with an understanding of how current and emerging mobile commerce applications can incorporate the use of e-signatures in their processes.

Chapter IX, *UbiSrvInt: A Context-Aware Fault-Tolerant Approach for WP2P Service Provision*, outlines the various potential advantages and challenges of wireless peer-to-peer applications. The authors present a novel UbiSrvInt approach that is highly robust to failure and capable of inferring a user’s service needs in ad-hoc wireless environments.

Section IV: Interacting with Mobile Devices

Chapter X, *Perceptions of Mobile Device Website Design: Culture, Gender and Age Comparisons*, explores how users who differ by gender, age and culture perceive the design of a mobile device and their subsequent level of satisfaction with the device. Quantitative and qualitative analysis of a controlled laboratory study revealed some interesting differences among cultural, gender and age groups relevant for mobile interface designers.
Chapter XI, *The Exchange of Emotional Content in Business Communications: A Comparison of PC and Mobile E-Mail Users*, outlines an empirical study that compared the exchange of emotional content in personal computers and mobile e-mail in business-related discussions. The authors found that the communication medium influences the exchange of emotional content in text-based communications.

Section V: International Perspective for Mobile and Ubiquitous Commerce

Chapter XII, *Mobile Internet Adoption by Spanish Consumers*, examines the key drivers of mobile Internet adoption by Spanish consumers. Through an empirical study, the authors find that Internet use experience, mobile Internet compatibility, credibility and attitude are positive drivers of mobile Internet adoption in Spain.

Chapter XIII, *Framework for Mobile Payment Systems in India*, introduces concepts, frameworks and potential models for introducing mobile payments in India. The author outlines the needs/concerns of various stakeholders and presents a technological landscape of possibilities for implementing mobile payments.

Section VI: Additional Selected Readings

Four chapters have been carefully selected from recent publications to complement and provide additional support to the original 13 chapters presented in this book. They provide further background on mobile security issues (Chapter XIV, *Mobile Code and Security Issues*); international considerations (Chapter XV, *Finland: Internationalization as the Key to Growth and M-Commerce Success*); mobile workforce management (Chapter XVI, *Mobile Workforce Management in a Service-Oriented Enterprise: Capturing Concepts and Requirements in a Multi-Agent Infrastructure*); and wireless opportunities in healthcare (Chapter XVII, *Bringing Secure Wireless Technology to the Bedside: A Case Study of Two Canadian Healthcare Organizations*).

Milena Head
McMaster University, Canada

Eldon Y. Li
National Chengchi University, Taiwan