Ubiquitous Commerce for Creating the Personalized Marketplace: Concepts for Next Generation Adoption

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Chapter I

The rapid growth of u-commerce, the new generation of e-commerce, together with the need for the adoption of new technologies, has necessitated the need for effective organizational changes to this challenging and eminent trend. The authors posit that firms should explore the consumers' perception of u-commerce and further exploit the strategic advantages of u-commerce with reference to their adoption of new u-commerce technologies. They propose a conceptual reference framework for helping organizations deal with this dynamic situation.

Chapter II

Service-Level Roaming: A New Virtual Home Environment Concept	13
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The authors will discuss on new methods and tools for building high personalized, virtual e-business services. A new service provisioning architecture based on Web services has been conceived, taking into account issues related to end-user mobility. The following pages deal with a proposal for creating real localized, personalized virtual environments using Web services and domain ontologies. In particular, to overcome interoperability issues that could arise from a lack of uniformity in service descriptions, they propose a way for controlling and enforcing annotation policies based on a Service Registration Authority. It allows services to be advertised according to guidelines and domain rules. Furthermore, this solution enables enhanced service/component discovery and validation, helping software engineers to build services by composing building blocks and provision/deliver a set of personalized services.

Chapter III

Performance gains from SFA investments have often been obstructed by the sales force's unwillingness to accept and use available systems. Studies show that a strong reason for resistance by the sales force to the technology is the failure to convince salespeople of the advantages and benefits of the new technology. Consequently firms face the challenge of selecting SFA technologies that their sales force will perceive as valuable and accept to use to enhance its performance. This issue becomes more challenging when it comes to introducing emerging technologies such as mobile technologies, where there is a risk of falling into the trap of overestimating/underestimating their potential value. The present study proposes a value-based approach for planning the introduction of mobile applications to support the sales force. The approach suggested provides guidelines on how to determine whether or not mobile technologies would add value to the sales force before those technologies actually get selected and implemented. Good planning of SFA investment would help firms avoid resistance of the sales force towards the implemented systems, rather than having to treat it at the post-implementation stage.

Chapter IV

By expanding the technology acceptance model, this study analyzes the consumer purchasing behaviors with virtual currency in Web2.0 drawing data from 311 users. This study focuses on which variables influence the intention to transact with virtual currency in Web2.0. Individuals' responses to questions about attitude and intention to transact in Web2.0 were collected and combined with various factors modified from the technology acceptance model. The results of the proposed model show that subjective norm is a key behavioral antecedent to use virtual currency. In the extended model, subjective norm's moderating effects on the relations among the variables are found significant. The new set of variables can be virtual environment-specific factors, playing as enhancing factors to attitudes and behavioral intention in Web2.0 transactions. This study provides a more intensive view of Web2.0 system users and is an important step towards a better understanding of the consumer behavior in Web2.0.

Chapter V

U-Commerce in the Financial Marketspace	
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The mission of this chapter is to investigate (1) how u-commerce is made available by online brokerage agents and the different interfaces they provide via mobile phone transactions, computer transactions, and/or land-line telephone transactions (either thru broker assisted transactions or interactive voice-response phone systems), (2) how the anytime anywhere demand and supply of financial knowledge and availability or non-availability of ubiquitous trading tools and systems affect the behavior of traders and investors in the financial market, and (3) to what extent ubiquity of information and systems tools are regulated in relation to stock trading, stock manipulation, and global volatility of financial markets.

Chapter VI

The advancements in information and communication technology (ICT) have resulted in the new concepts being developed in this discipline. Ubiquitous and pervasive computing is among the number of other concepts provided by the ICT. Especially these concepts are providing scope for radical changes in business processes of organizations. It would become a necessity for integrating business with these concepts to face the new realities in business process in organizations. This chapter describes the historical background of commerce in electronic environment, the concepts related to context computing, ubiquitous computing and pervasive computing, and Grid computing. Further it explains the recent trends and also talks about the three business models with these concepts incorporated in three different contexts.

Chapter VII

Developing a Software Agent for Establishing a Convenient Customer-Driven	
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Group-buying (or volume discount) is a promising field in electronic commerce for applying software agent technologies. In a traditional group-buying mechanism, either a customer or the supplier calls up a sufficient number of buyers for a target item, and then coordinates the actions of all participants during the whole process. Most participants involved in a group-buying project are passive. Studies in this field were therefore focused on developing an effective mechanism so as to enhance the utility of every participant in a fair way. However, the utility of a customer can only be maximized if the customer can buy the item he/she personally needs at a possibly lowest price, not just an item recommended by another customer or the supplier that he/she is supposed to like. In other words, it would be more flexible if every customer can initiate a group-buying project of his/her own for the item he/she personally needs in a convenient way. As a result, there will be multiple group-buying projects for multiple target items at the same time. To this end, a software agent is developed in this study to make every customer easily reach the web page he/she browses for a target item for group-buying. The data of the item will be automatically extracted and uploaded onto a website which then informs every registered user of the group-buying project of this item. Requests for the same item will be combined, and there are always multiple target items on the website for group-buying at the same time. As a result, cross group-buying becomes possible. An experimental system is constructed in this study to demonstrate the applicability of the software agent. Its advantages and/or disadvantages are also discussed.

Chapter VIII

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Ubiquitous computing will change the way people live with technology. At the same time it will also affect the way people access and use services. It is obvious that these new ubiquitous services have a lot of business potential. However, before this potential can be fully exploited, people need to understand the crucial factors behind creating commercially successful ubiquitous services. To do so, research is needed in three important areas. Firstly, the authors need to understand the basic nature of ubiquitous services, that is, their unique characteristics. Secondly, people need to know the needs of the customers in order to create value to them so that they will accept and use ubiquitous services. This can be done by involving users into the innovation process of ubiquitous services. And thirdly, people need to understand the value creating networks developing and commercializing the ubiquitous services as well as to find an appropriate business model for describing them. Value creation is impossible without a successful network business model which is yet to be found. Thus, the aim of this chapter is to describe, examine and give proposals for further research in these three important research fields which can be seen as the prerequisites for developing commercially successful ubiquitous services.

Chapter IX

Framework for Proximity Aware Mobile Services	135
Jon T.S. Quah, Nanyang Technological University, Singapore	
V. Jain, Nanyang Technological University, Singapore	

This chapter discusses a service oriented framework to realize proximity aware services for mobile devices. It describes the architecture at both client and server ends. Using the proposed framework we develop a prototype to realize a real world application. The chapter ends with a discussion on the framework and possible future enhancements.

Chapter X

In models to study technology acceptance, the empirically validated path from perceived ease of use (PEOU) to perceived usefulness (PU) is usually rationalized by the argument that the less effort it is required to use a technology, the more useful the technology is. This argument is rather generic to fully account for the relationship between PEOU and PU. In this study the authors examine the effects of the common antecedents of PEOU and PU on their relationship. The authors first extensively reviewed the literature to identify the common antecedents of PEOU and PU. We then conducted a survey of users' acceptance of some common e-learning forums such as ICQ, WebCT, and MSN. Based on variance analysis we found that user-interface design (UID) explains 43% of the relationship between PEOU and PU, and that learners consider UID very important in deciding whether to accept an e-learning forum for their learning and communication. This paper contributes to research by identifying the factors that account for the relationship between PEOU and PU, and provides e-learning developers with managerial insights on how to leverage UID for business success.

Chapter XI

Data Quality on the Internet
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This chapter will review the studies on the data quality on the Internet and will propose some suggestions to improve existing Internet resources. The layout of this chapter is as follows. First, the definitions of data quality will be visited. Next, the author would like to review the reasons of poor data quality. Framework and assessment based on the past literature will be reviewed and finally some recommendations are highlighted.

Chapter XII

"Don't Think but Look": The Practice of the UDRP Manifests that it is Procedurally Unfair 177 Konstantinos Komaitis, University of Strathclyde, UK

Over the past decade, electronic commerce has expanded and has provided new ways of conducting businesses in a brand new environment. Lately u-commerce seems to be pioneering the field of electronic transactions. Where "u" stands for ubiquitous, unison, unique and universal, u-commerce offers the opportunity to users to conduct business everywhere and at any given moment in time. The simplicity of u-commerce transactions makes the issue of domain names more relevant than ever before. This chapter examines the procedural unfairness of the Uniform Domain Name Dispute Resolution Policy (UDRP) in an effort to demonstrate that the "regulatory" framework surrounding domain names does not respect their technological necessity.

Chapter XIII

South Korea: Vision of a Ubiquitous Network World1	91
Jounghae Bang, Penn State University Mont Alto, USA	
Inyoung Choi, Georgetown University, USA	

Koreans envision a world in which anyone can access information and the tools to explore it anytime, anywhere. Korea has been one of the leaders in mobile industry and this chapter explores the past, the present, and the future of mobile technology and markets in Korea. Starting with background and a brief overview of the current situation, this chapter uses the CLIP framework to describe mobile services in Korea. The chapter concludes with a brief discussion of challenges and future strategies.

Chapter XIV

The growth and convergence of wireless telecommunications and ubiquitous networks has created a tremendous potential platform for providing business services. In consumer markets, mobile marketing is likely to be a key growth area. The immediacy, interactivity and mobility of wireless devices provide a novel platform for marketing. The personal and ubiquitous nature of devices means that interactivity can, ideally, be provided anytime and anywhere. However, as experience has shown, it is important to

keep the consumer in mind. Mobile marketing permission and acceptance are core issues that marketers have yet to fully explain or resolve. This chapter provides direction in this area. After briefly discussing some background on mobile marketing, the chapter conceptualizes key characteristics for mobile marketing permission and acceptance. The chapter concludes with predictions on the future of mobile marketing and some core areas of further research.

Chapter XV

This chapter has the aim to point out an important functionality of a ubiquitous mobile system and more specifically its application in the learning domain. This functionality is the possibility to access the learning material from mobile devices, like PDAs (Personal Digital Assistants) during their offline periods and the technique to approach it, called hoarding. The chapter starts with the overview of a concrete mobile learning system – Mobile ELDIT, thus that to give a clear idea of when and how this problem appears and why it is important to pay attention to it. Later, a description of the development approaches for both general and concrete solutions are discussed, followed by more detailed description of the important hoarding steps.

Chapter XVI

The advancement of technologies to connect people and objects anywhere has provided many opportunities for enterprises. This chapter will review the different wireless networking technologies and mobile devices that have been developed, and discuss how they can help organizations better bridge the gap between their employees or customers and the information they need. The chapter will also discuss the promising application areas and human-computer interactions modes in the pervasive computing world, and propose a service-oriented architecture to better support such applications and interactions.

Chapter XVII

This chapter introduces the notion of trust as a means to establish security in mobile ubiquitous applications. It argues that trust is an essential requirement to enable security in open network environments. In particular in wireless ad hoc environments where there is no network topology. In such environments communication can only be achieved via routes that have to be trusted. In general it may be hard, or even impossible, to establish, recall and maintain trust relationships. It is therefore important to understand the limitations of such environments and to find mechanisms that may support trust either explicitly or implicitly. The author considers several models that can be used to enable trust in such environments, based on economic, insurance, information flow and evolutionary paradigms.

Chapter XVIII

This chapter examines how people in organizations appropriate new computer-based media, that is, how they adopt, reconfigure and integrate advanced communication technologies such as groupware or desktop conferencing systems into their work practice. The chapter presents and analyses findings from an in-depth field study of the adoption and use of a Web-based groupware application – a "virtual workspace" – in a large multinational firm. The analysis focuses, in particular, on the fact that people in modern organizations have plenty of media at their disposal and often combines old and new media to accomplish their work tasks. Furthermore, it highlights the crucial role of organizational communication genres in shaping how people adopt and use new media. The authors argue that understanding and facilitating the process of appropriation is the key to the successful introduction of new media in organizations.

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