Chapter 3.4

Context Related Software Under Ubiquitous Computing

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ABSTRACT

The advancements in information and communication technology (ICT) have resulted in the new concepts being developed in this discipline. Ubiquitous and pervasive computing are 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.

INTRODUCTION

Information technology has advanced by delivering exponential increase in computing power. Telecommunication technology has like wise advanced communicating capabilities. Convergence of these two technologies has become possible due to rapid advancements made in the respective technology. This convergence has been termed as information and communication technologies (ICT) as a new discipline. ICT is the major stimulus for facilitating business organizations to adapt themselves to the changes in business environment. Mobile computing is one of the concepts in ICT discipline has helped globalization to become successful. Mobile computing which is used in different contexts with different names. Asoke L Talvkder and Roopa R Yavangal (2005) list the different names related to mobile computing. They are 1-Anywhere Anytime Computing 2-Virtual home environment 3-Normadic computing 4-Pervasive computing 5-Ubiquitous computing 6-Global service portability and 7-Wearable computers. While talking about wearable computers Paul
electronic commerce was affected. Due to globalization policy followed by many countries across the globe the applications related to electronic commerce have started gaining momentum from 2003. Now many organizations irrespective of the size of their organizations have been making use of electronic commerce applications. In the present business scenario, it may be noted that e-commerce business models are being developed for various segments of business and industries. These models can be classified under three purposes such as organization purpose, people oriented and society purposes. The advancement in mobile communications have made mobile commerce (m-commerce) popular. m-commerce can be considered as one or more features in e-commerce. Mobile commerce is the successor of today’s PC based e-commerce. Two more concepts are emerging under electronic environment. They are space commerce and ubiquitous commerce (u-commerce). Commercial satellite systems are made use of developing system models in multiple domains such as health, education and business. Ubiquitous commerce focuses in the development of location based application software.

**CONTEXT COMPUTING**

Generally business models developed under information systems follow two methods. They are “Push” and “Pull” methods. When information is thrust on end users it is considered as “Push Method”. The classic examples for this method are advertisements (print and electronic media), telemarketing and information through email and snail mail. End users when they browse websites and go through hard copies for specific information, it is termed as “Pull Method”. It has been the practice among end users to understand the information provided under the above methods and relate it to the particular context. This means end users are proactive to context computing. Now attempts are being made to make the information