



Ubiquitous Commerce: An Upgradation Technology of E-Commerce and M-Commerce

Dr. S. SHRILATHA

M. Com., M. Phil., Ph. D., Assistant Professor in Commerce (Shift –II), Department of Commerce (Shift - II), Auxilium College, Gandhi Nagar, Vellore-6.

Ms. M. D. LALITH PRIYA

M. Com., M. Phil., Assistant Professor in Commerce (Shift –II), Department of Commerce (Shift - II), Auxilium College, Gandhi Nagar, Vellore-6.

ABSTRACT

Development of mobile technology and ubiquitous computing has created an era of "Ubiquitous Commerce or U-Commerce". With a rapid development of technology in networking and communication, commercial activities also affected. Hence u-commerce provides ultimate and personalized services to the users. Thus u-commerce is an extension of e-commerce, m-commerce and voice commerce. It is also a combination of electronics, mobile/ wireless, voice and silent commerce. In the world of u-commerce users can access networks at anytime from anyplace, using a range of devices to invoke unique and personalized services. The dimensions of u-commerce ubiquity, uniqueness, universality, unison provides two benefits to the single users and businesses: increased convenience as well as more modified services.

KEYWORDS

Ubiquitous commerce, U-Commerce, Personalized Services, Ubiquity, Universality, Uniqueness and Unison.

INTRODUCTION

With the rapid development of ubiquitous computing and mobile communication technologies, leading to drastic changes in the traditional method of business. As an extension of the traditional method of business to e-commerce and m-commerce and u-commerce is taking place in the present scenario. Ubiquitous Commerce is also known as 'U-Commerce'. U-Commerce is a new dimension and extended use of internet usage in today's environment. The aim of U-Commerce is to make an individual's life simplified by using digital environment which is pervasive, could be customized to the individual's needs and response to his needs. In this aspect, the various versions of u-commerce systems have been developed which have been experimenting in homes, hospitals and public sector facilities. Thus u-commerce delivering personalized services to the customers according to their characteristics and preferences. U-commerce is the combination of electronic, wireless/ mobile, television, voice, and silent commerce.

U-commerce standard for a world in which consumer (user) can approach to any network from any place and at any time by using various technology devices in order to get unique and personalized service.

U-commerce refer to "the use of ubiquitous networks to support personalized and uninterrupted communications and transactions between a firm and its various stakeholders to provide a level of value, above and beyond traditional commerce". (Watson et., 2002)

Sheng (2006), identified these stakeholders that included customers, suppliers, governments, financial institutions, managers, employees and the public at large.

EXTENSION OF U-COMMERCE

TYPE	FOUNDATION
Commerce	Transportation Network
Electronic Commerce	Internet
Mobile Commerce	Cell- Phone Network
U-Commerce	Ubiquitous Commerce



OBJECTIVES OF THE STUDY

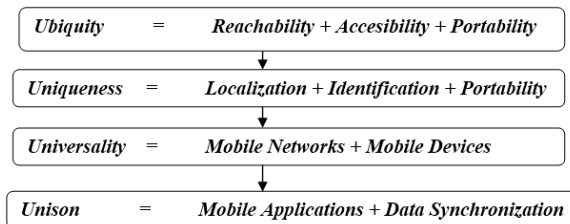
1. To evaluate the characteristics of u-commerce.
2. To identify the opportunities and threats for u-commerce in the present scenario.
3. To learn the components comprised in u-commerce.

METHODOLOGY OF THE STUDY

This study purely depends upon the secondary data. The data collected from Journals, websites, books, newspapers.

CHARACTERISTICS OF U-COMMERCE

Watson in his paper explains "U-commerce as the Ultimate Commerce".



Ubiquity

Ubiquity means computer at everywhere, and customers are able to access to the network at anytime and any place. It is because of computers will be everywhere, and the device is connected to the internet even in the rural community. It can also be reachable by the customers at anytime and any place through the computers. Due the omnipresence of the computer chips it will make them "invisible" as people will no longer notice them.

Eg. Payment system of technology is becoming ubiquitous by removing the constraints of location and functionality through online payment.

Uniqueness

Junglas and Watson, (2006) defines uniqueness as "drive to know precisely the characteristics and of a person or a an entity". It also incorporates the ideas of localization, identification and personalisation. Uniqueness means that the information provided to the users is easily available to their current context and according to their needs in a specific place and time. In other words, uniqueness suggests that the users can be uniquely

identified not only their identity by their preferences and also in terms of geographical positions.

Universality

Universality means the devices are universally usable, multifunctional entities and inert-operability. Due to the internet, satellites of the desktop, laptop, cell phone or Personal Digital Assistant (PDA) free mobility and lots of information at any time. Universality eliminates the problem of incompatibility due to lack of standardization, so users can have access to mobile phones in different networks, different location and in different time.

Unison

Unison aggregates the mobile applications and data synchronization in one construct. (Junglas and Watson, 2006). It allows the data to be integrated across different applications so that users have a consistent view of information. It can be expressed in a u-commerce environment, it is possible to integrate the various communication systems such that there is a single interface or connect to have a consistent view of their information- irrespective of their device used. Eg. Change in address in the phone book should reflect changes their cell phone, calendar and other devices simultaneously.

OPPORTUNITIES OF U- COMMERCE

The evolution of ubiquitous commerce in the daily life of the users as well as emerging trend of latest buying and selling through u-commerce and the approaching pervasiveness, a few opportunities as well as threats can be identified.

Opportunities:

- Individual advertising and also information supply e.g. based on location, time or mood of the customer.
- High availability of services through internet.
- New potential revenue for supplier and accordingly new business models.
- Advanced analysis, alternatives for suppliers and customers (location, time, habit)
- Increasing mobility of customers and suppliers.

Threats:

- Information privacy and threatening of mass surveillance.
- Increasing requirements due to more diversity and quantity of devices and also energy consumption.

Information overload

- and likely complexity - also Big Data
- Higher vulnerability to trick and security holes; e.g. as a result of more targets
- Rising exclusion of the elderly based on the requirements of higher technical skills
- Desocializing the relationship of customer and supplier

COMPONENTS OF U- COMMERCE

Each element of u-commerce is used as positive characteristics of other elements and modified according to the new and sophisticated customers' need.

E- Commerce (Electronic Commerce)

The e-commerce is the modern business technology that addresses the need of customers, merchants, organizations to cut the costs by the improving service quality through saving the time with the help of internet. It is done through the web to transact business, i.e. buying and selling of products or services takes place through the internet. Here are three types of e-commerce business to consumer (B2C), business to business (B2B) and consumer to consumer (C2C). In addition to this, government to government (G2G), government to consumer (G2C) and consumer to government (C2G).

M- Commerce (Mobile Commerce)

Mobile commerce is a key part of u-commerce, because it creates the possibility of communications between people, business and objects to take place at any time from any place. The business

transactions are done through the mobile devices. The users can use the mobile phones or mobile devices connect at any time at any place in the world irrespective of geographical borders.

Mobile commerce can be termed as "Wireless Commerce". Wireless communication helps to perform the business transaction in an efficient and effective ways. Through this type of commerce information can be accessed through wireless means. It provides many advantages for both companies and the users such as increasing the sales/ profit, coordinating remote employees, worker mobility, improving customer services and capturing new markets.

V- Commerce (VOICE COMMERCE)

Voice commerce is otherwise termed as V Commerce. In V Commerce the user interacts with the commercial website to recognize the voice through voice recognition technology. Voice technologies comprised of speech recognition, voice identification, and text-to-speech. The voice commerce business aims to reduce the business of call-centre operation costs and increase as well as improve the customer service. This leads to increase the source of new revenue, but it will take long term as a multi channel strategy.

T- Commerce (TELEVISION COMMERCE)

Television Commerce is a medium used to present the product and processes the orders. It is an interactive digital television that will provide a two-way personalized communication. Television communication is an audio-visual and gives 24 hours non-stop shopping channels promotes product information to the customers. Nowadays, the transactions made through interactive or connected TVs is called as Smart TVs. Television commerce is mainly used as the end user channel, because it reaches the widest range of population, government and to deliver the service. The interactive TV integrates the software and set top boxes to perform the interactive TV functions such as time shifting and filtering advertisements. With the advancement of 3G/ 4G technology, in the future mobile commerce, telecommunication and television commerce will be integrated. Eg. Launching launching Mobile TV in Beijing Olympic games.

S- Commerce (SILENT COMMERCE)

Silent Commerce is used for advanced tagging and sensor technologies. Moreover, it is wireless mobile communication to make everyday objects intelligent and interactive, creating new information and value streams. It is "Silent" in that objects can communicate and commerce can take without the intervention of human beings. The major technology of silent commerce is RFID (Radio Frequency Identification), GPS (Global Positioning System), NEMS (Nano Electro Mechanical System), MEMS (Micro Electro Mechanical System) and Telematics. The applications of silent commerce benefits of improvement in productivity and services like material management, inventory tracking, supply chain management, theft prevention, asset management, production management, vehicle management, micro payment, access control, customer convenience and customer service.

CONCLUSION

U-commerce creates an economy which is more flexible. U-commerce will widely affect many aspects of business. As a result, it will provide an improved operating efficiency, enhanced customer services, increased personalized services, continuous supply chain management and increased interactivity. The evolution of u-commerce helps to drive towards "Smart Commerce". This is a commerce which is more flexible, more interconnected with many technologies efficiently and resilient. U-commerce is believed to be a both driver and outcome of smart commerce because of mobile technology growth. The smart commerce is expected to grow explosively with many players offering many new services, new payment tools and new ways to access the goods and services at any time, anywhere and any place through mobile technology. U-commerce represents the next step in digitalization as true ubiquity. The u-commerce vision is to transcend borders and links the users geographically as well as

technologically. This smart commerce helps the user to be more convenient, more interesting and more productive, which represents the clear business oriented technique.

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