

RE-DEFINING THE FUTURE OF COMMERCE: MOBILE COMMERCE AND THE EMERGENCE OF SIXTH SENSE TECHNOLOGY

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Abstract

Over the past decade businesses and as a matter of fact commerce has gone through some revolution from the traditional commerce to a digitized platform, thus from “face – to-face” to a virtual economy which is being pioneered by technology. Now mobile users are able to use their phones to transact businesses every day. On the mobile commerce platform users can procure flight ticket and utilize the electronic statement on usersr cellphone to verify users flight. Now smartphones has the ability to establish nearby stores or vending stands with Global Positioning System (GPS) and then make a buy from the cellphone. One spot worth exploiting by businesses; large, small or medium is mobile commerce. Phones which was previous capable for only making calls and sending messages has grown or evolve to the level of which it can be used to buy lottery tickets, shopping, gaming, direction location device etc.

Another technology which is currently emerging is the sixth sense technology. It is receiving a massive praise for it unthinkable innovation and easy to use tools is Sixth Sense Technology. Sixth sense is a wearable motion based gadget that connects our real world with digital information on the computer and let us use ordinary hand signals and gestures to intermingle with that information, thus making it an interface between our brain and the computer [2]. The sixth sense technology conception is a technological move and idea to tie the digital world with the real world. Its basic use is to cause computers to adapt to human needs. This mean users do need neither a mobile phone nor a laptop to carry out transactions on a digitized economy. Now the question is with this kind of technology where lies the future and faith of mobile commerce (m-commerce)? In this paper, we will be discussing the practical facet of m-commerce and the sixth sense technology. We will also cover the emergence and necessity of sixth sense technology, why it will shadow mobile commerce when it materialised and the writers’ proposal.

Keywords: M-commerce, Sixth sense technology, wearable device, GPS, digital world.

Introduction

Mobile commerce (m-commerce) is being extensively and exceedingly received and utilized as a trendy means of business and commerce. Mobile is becoming a dominant force for carrying out business largely because using mobile devices is not only cost-efficient but also it comes with agility, litness, flexibility, time saving, speed and convenience to its clients [14]. Mobile commerce is a compartment of electronic-commerce, which is made up of every electronic-commerce dealings, operations, businesses and transactions, passed and carried out, using a mobile devices. Eg smartphones [15]. Electronic commerce and as a matter of fact, M-commerce has resulted in a considerable evolution towards modus operandi of business, growth, improvements, strategies, desires and expansion of electronic-commerce platforms and

applications [3][18]. The intensification, growth, developments, anticipated for Business to Business (B2B), Business to Consumers (B2C) and other sectors of electronic commerce in the next few years is unparalleled and supreme by any criterion or benchmark. Currently Mobile commerce is the accepted heir to electronic commerce [1][6]. With the swift increase of mobile devices in the market, including mobile phones, Personal Digital Assistant (PDA) plus other handheld devices. Mobile commerce is extensively seen as dynamic idea for next invention of electronic commerce [17]. A suggestion from the Gartner Group indicates that, consumers of electronic commerce will in next to no time will emerge from mobile technology users including, smartphones users with access to mobile trade technology. Many authors recommended that next juncture or stage of electronic trade development and growth will be base on wireless and Mobile commerce [9],[16], [10], [7], [19]

The Mobile Commerce Phenomenon is Just a Beginning

Mobile commerce was first carried out in 1997, It all started when CocaCola vending machines with a wireless application protocol were mounted in Finland, this allows consumers with access, to send SMS text messages to the machine for payment when purchase is made. In 1997 again, there was another revolution in the world of mobile commerce, the first mobile device (cellphone) banking service was also instituted in Finland, by means of Short Message Services [9],[12]. Mobile commerce also known as m-commerce creates the capabilities for clients and businesses to perform trading activities using a mobile devices e.g. A mobile handset (cellphone), Personal Digital Assistant, Smartphone and other up-and-coming mobile apparatus. Mobile commerce comprises of various mobile gadgets and tools in delivery diverse types of fiscal and non-fiscal business transactions. Mobile commerce make use of various sophisticated technologies as in Short Message Services which also runs on interfaces such as Long Term Evolution, Code Division Multiple Access, Wideband Division Multiple Access, Bluetooth apps and the assimilation of other carriers to Internet Protocol services in the course of WAP tool or dense Hyper Text Mark-up Language e.g the Japanese I-Mode services. This amalgamation is not only the highest but also the growing markets of Electronic business and it comprise of the advancement, innovation, expansion, design of emerging new ideas, applications, models, services and hi-tech remedies and solutions [5]. It has been statistically proven that more consumers or clients have access to mobile devices as against computers, in this case - laptops, desktops etc [22]. This is a fundamental prove that mobile commerce has the prospect and potential to tie, not just Large businesses but also medium and small scale enterprises and consumers on a colossal or immense magnitude. Consumer's enthusiastic acceptance of mobile technology in the past two decades is a factual evidence of mobile commerce potential and prospect.

As much as we can't deny the rate of technological growth and advancement, Mobile commerce is here with us with it various business models as the subsequent build up of electronic commerce in this current virtual economy. Currently it is unclear where the chronicle of mobile commerce will fade. Pioneers and researchers, authors and gurus in Electronic business has anticipated a great future for mobile commerce.[7],[14][16],[23].

The realization of the full potential of mobile commerce is commanded by these two factors for the progress of M-commerce in the near future:

- Mobile commerce becomes the next build up of electronic commerce with all the ups and downs of publicity.
- Mobile commerce is an advancement(the next step) of Electronic commerce into the virtual-digitalized mobile economy.[23]

Practical Facet of Mobile Commerce

Mobile commerce services can be grouped in relation to its end-consumer classification such as, Consumer to Consumer, Business to Consumers and Business to Business. Most of the current mobile commerce operational services are in line with products exchange, services & information in a situation of Business to Consumers e.g. Buying a book from amazon.com [12] These services embrace mobile advertisement (m-advert), m-financial services (m-finance), client location detail (e.g. Google map, location, direction), mobile stock records management, mobile games. Additionally to the contrivance and wireless setbacks, Mobile commerce is largely influenced by the wireless communications platform. Current and future mobile commerce services delivery includes sophisticated and hi-tech mobile banking services. (e.g. opening of accounts, transfer, bills payable and receivables, e-statement, airtime purchase, m-health etc), mobile trade services (e.g. stock/share trade), e-card information (e.g. accounts balance), flight services (e.g. online booking, flight schedule) movie ticketing etc

In reference to Leung, Chan and Chan [4], Mobile commerce application on the whole can be categorized into three classes, Namely:

- (1) Procurement of tangible products that demands some kind of information circulation to finalize the business deal or transaction
- (2) Procurement of services including buying and selling of share/ debentures/ stocks and
- (3) Information delivery such as news broadcast headlines and bulletin, stock exchange market report, current exchange rate, health report etc [4]

Notwithstanding the above classification the mobile commerce services are branded into four main streams: (I) Amusement or Leisure services (Television, gaming, etc), (II) Information Delivery Services (weather broadcast, city guide, News, advertising, etc) (III) Business Transactions (ticket booking, auctioning, reservation, shopping, e-wallet, sports betting, banking etc) (IV) Communication Services (online chat rooms, video calls and conferences, etc)

Why Mobile Commerce is Extensively Used and Accepted

The rapid innovation, development and advancement in the wireless communiqué has tremendously greased the rate of internet extension to various transportable devices and electronic gadgets including cellphones. The fierce rivalry in the mobile service delivery sector has orchestrated frequent and rapid innovation by wireless providers and has also caused less expensive indulgence by consumers; hence the need to take advantage of this technology, these mobile phones have automatically converted into a product [21]. The mobile phone has the capacity to perform transactions that were formally done on the computer in this case we are referring to the laptop. Desktop etc. With a large percentage of the masses having access to a smartphone than laptops and desktop, the expectations are that, more people will operate or transact on a mobile commerce platform.

Sixth Sense Technology – *The emerging digitized revolution*

In the current digitized scenario, we are using devices such as cell phones, tablets etc which enable us to browse through the vast internet that help us receive and manipulate information. On this same mobile platform, we are able to entertain, communicate, share information, transact and do businesses without using physical object interaction.

Sixth sense technology on the other hand is a revolutionary method to augment or merge and create an interaction between tangible world objects with data on the internet or cloud. This technology is a neck-wearable portable device that operates as signal computer circuit or port then embellishes the tangible object with virtual information on the internet or cloud which then makes it possible for us to use signals and stuff to intermingle with virtual information by making use of its created port or circuit. Sixth sense technology is massing a huge acceptance for its fashionability, hi-tech innovation, simplicity, user – friendly and its potential to enhance today's life style. Sixth sense is a neck-wearable gesture gadget that connects our real planet and the virtual data on the

computer, then further allows humans to employ signals and actions to communicate with data, thus making the device an interface between our minds and the computer. It is being pioneered by Mr. Pranav Mistry a former Phd student of MIT Lab and currently working with Samsung. It has the potential to eradicate hardware usage, thus revolutionizing itself in a large way [8][11][21] Sixth sense technology makes it easier for humans to access information about the world without taking out a gadget and browsing through the internet. Information over the World Wide Web needs to be more useful to people with minimal effort and pure ease to access, this is what SST tries to address.

How Does the 6th Sense Works

6th Sense technology makes use of a combined small gadget consisting of tiny projector together with a camera along with mirror and a phone. It camera and cellphone together act as a computer and connect us to the “internet or cloud” which is the data kept in the World Wide Web. The camera recognizes objects around it instantly, using computer vision based technique. The tiny projector then sheathing the data on a surface e.g on a wall or A4 Paper etc. Hand gestures and images captured by the camera are processed using software programs and it also trails the point of the colored markers – which also referred as visual tracking fiducials found on the finger tips of the user. The movement of the fiducials is interpreted into signals and gestures that operate as interactive commands for the opened projected program interface. The mirror reflects the projection emanating from the projector then proceeds to project it unto a required location e.g wall, paper, hand, etc. The user can manually configure the slant of the mirror to convert the location of the projection. The purpose of the mirror is to assist sixth sense to overcome the restriction of a restricted projection gap. The purpose of the microphone is discretionary module of the sixth sense. It’s mostly essential when using a piece of paper as communicative surface. The user just attaches the microphone to the sheet; this enable the microphone tied to the paper to attract or seize the sound signal when a user touches the sheet. The data is then forwarded to the computing for dispensation; it is then join together with the trailing data gathered from user’s finger touches. This enables the sixth sense technology to automatically recognize the exact touch proceedings on the sheet.[9],[20]

The contemporary model is like the dimension of cigarette pack, this is worn like jewellery around the neck. An add-on smartphone operates or runs the Sixth Sense Software and controls the link to the net [18]. Sixth sense is the bridge that links the virtual world (intangible) to human physical world (intangible) which creates a platform for humans to intermingle with these virtual data via signals and hand movements. The bottom line is to make the whole world usersr computer [13], [21].

Why Six Sense Technology Commerce (SST-Commerce) Could Shadow Mobile Phone Commerce (M-Commerce)

During a Computer –Human Interaction (CHI) conference in Boston 2009, “Dr Pattie Maes, the Heads of Fluid Interfaces Group at MIT said while today mobile computing devices can be useful, they are **deaf and blind**, meaning that we have to stop what we’re doing and tell those devices what information we need or want. We have a vision of a computing system that understands at least to some extent, where the user is, what the user is doing and who the user is interacting with”[24]

Imagine the following scenario

1. Imagine a world where users can make a phone call from usersr palm without a real smartphone.



2. Imagine users can access the internet on any surface example, on a paper, on the wall, on the floor etc and transact business online without a smartphone, laptop, palmtop, and tablet.



3. Imagine users can take a picture just by a finger gesture. At the same time users can edit it on any surface and mail to a friend.



4. Imagine users can get a video feed of an article users are reading in a Newspaper just my a gesture.



5. Imagine users can stream and play game online from a piece of paper.



6. Imagine a world where users can check the status of usersr ticket (plane ticket, movie ticket etc) just by touching the ticket.



These are some of the few capabilities and potentials of SST. This is the future platform of technology and as a matter of fact for businesses and commerce and other mobile related industries.

Low cost driven: The sixth sense device is priced as low as \$300, despite it level of technology and unprecedented innovation [13]

Compare the price of this device to the prices of smartphones and tablets on the market, this means that in the future if this technology materialized, consumers attention will be directed to this new technology which may affect the use of mobile phones (smartphones), tablets pc etc.

Why SST-Commerce Could Takeover M-Commerce

- No computer skills or pre-knowledge is required to browse data. It will be easier for human to be technologically awakened all the time and to connect to the world via this newest technology evolution.

- No need to carry hardware devices such as smartphone, laptops, tablets etc as one can easily browse, communicate, store, connect and do business online anytime anywhere using the sixth sense.
- It does the work of a smartphone, projector, laptop camera, internet etc simultaneously.
- Very cheap than most smartphones on the market despite its high-tech and innovations.

Writers Proposal – Sixth Sense Technology Commerce (SST-Commerce)

In reference to Ozaka 20014, Ozaka predicted m-distribution, m-shoppers as an add-on future for mobile commerce. Neumann and Reichardt, Bauer, Barnes also anticipated m-entertainment and information as a new future dimension for mobile commerce. Some are also of the opinion that clients to electronic commerce will emerge from cellphones especially smartphone. Many researchers suggested that next phase of electronic business growth will be wireless and M-commerce. It is judge that mobile commerce will become the next profitable phase of electronic commerce; hence organizations from diverse sectors are investing into mobile commerce to wedge their authority of this platform [16] Researchers in the commerce community have channelled all their attention and effort into M-commerce as the future, disregarding the emergence of sixth sense technology as the new emerging revolutionary in the digitized economy. Without underrating the capabilities and potentials of M-commerce, the writers will also like to propose *SST-Commerce* as the emerging future of commerce.

For the purpose of this article, we define SST-Commerce as *“The interaction between the physical world and the use of ICT for the purpose of merging and carrying out diverse transactions, Organizational business processes and modus operandi, value chain and with the intent of enhancing trade rapport and value chain on a sixth sense platform”*

Future Works

Further works has to be carried out on how sixth sense technology commerce will affect the various business Industries, thus banking industry, health, education, etc and it impact on our social life.

Conclusion

Base on the facts presented, it proves the unbelievable high-tech scope of sixth sense technology. It has the potential and the capacity to completely evolve human’s perspective about the real world object and how it can stamp it authority on the future of commerce and completely faced out mobile commerce. It will make the business world more interesting, informative and more accessible. It will also enhance business processes and activities.

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