INCREASING THE EFFICIENCY OF E-BUSINESS USING PERVASIVE COMPUTING

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ABSTRACT

Electronic business (eBusiness) is improving and is designed to integrate the technology and business processes with the usage of internet. eBussiness represents only a fraction of worldwide business, but is one of the fastest growing sectors and provide entrepreneurs with excellent opportunities to enter the market[1].The growth of eBusiness took off in 1990's. eBusiness helps in quicker and easier communications which helps in day-to-day life of an individual. Easy access to broader information, increasing hour of operation opportunities to adopt new business models are some of its advantages. The site which we go through sets an excellent example for eBusiness, these are ebay, jabong.com, olx.com, etc. One of the reasons for the high effectiveness of online advertising is that users interact with the web at a far more personal and intimate level than they interact with other advertising media like the radio or television [2]. To improve this effectiveness of eBusiness we use pervasive computing. In this paper we examine some of the possibilities of pervasive advertising.

Keywords : Mobile Computing, Pervasive Computing, eBusiness, Protocols.

I INTRODUCTION

1.1 eBusiness

It can be as simple as using the internet to send emails between staff or to communicate with suppliers. Internet provides consumers with an increasing amount of ways to interact with businesses and has made buying and selling more competitive worldwide. It is more than having a website for your own business. eBusiness helps to reduce the time and effort of suppliers and consumers. The transformation of an organization's processes to deliver additional customer value through the application of technologies, philosophies and computing paradigm of the new economy [3]

1.2 Mobile computing

The discipline of mobile computing has its origin in Personal Communications Services (PCS). PCS refers to a wide variety of wireless access and personal mobility services provided through a small terminal (e.g., cell phone), with the goal of enabling communications at any time, at any place, and in any form. [4]

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In mobile computing platform information between processing units flows through wireless channels. Mobile computing involves mobile communication, mobile hardware, mobile software example pda's, smart phones, etc.

1.3 Pervasive Computing

Pervasive computing goes beyond the realm of personal computers: it is the idea that almost any device, from clothing to tools to appliances to cars to home to the human body to your coffee mug, can be imbedded with chips to connect the device to an infinite network to other device.

II HOW E-BUSINESS WORKS?

Once we have decided the target audience for an ad and the time to deliver the ad, we need to choose the appropriate means of delivering the ad. E-commerce has exploded in the last 10 years. To achieve an increase in value by using organization wide business concepts - this is the task the E-Business-team dedicates itself to. Companies are integrating themselves within the globalized worldwide economic streams in different ways. One of these ways is also the implementation of electronic or computerized interchange of data and of documents respectively. Electronic interchange of documents (EDI) is providing the suitable base for the swift and efficient interchange of information between information systems without errors. When using standard messages or documents respectively is the electronic interchange enabling also the use of common language between information systems of different organizations wherever in the world.[5] .
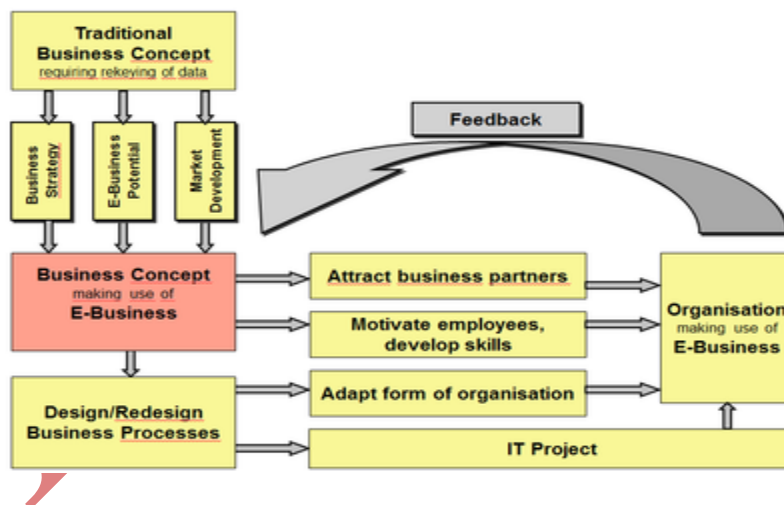

Fig. The E-Business concept.

III WHAT IS PERVASIVE COMPUTING?

The idea that technology is moving beyond the personal computer to everyday devices with embedded technology and connectivity as computing devices become progressively smaller and more powerful. Also called *ubiquitous*

computing, pervasive computing is the result of computer technology advancing at exponential speeds -- a trend toward all man-made and some natural products having hardware and software. Pervasive computing is a new dimension of personal computing that integrates mobile communication, ubiquitous embedded computer system, consumer electronics and power of Internet. It is a rapidly developing area of Information and Communications Technology (ICT). The term refers to the increasing integration of ICT into people's lives and environments, made possible by the growing availability of microprocessors with inbuilt communications facilities. Pervasive computing has many potential applications, from health and home care to environmental monitoring and intelligent transport systems.[6]. Pervasive computing environments encompass many different devices of various sizes and capabilities, including PDA cell phones, video game consoles, robotic dogs. Furthermore, in addition to well-administered and controlled computing server rooms with racks of computers, computing devices are now everywhere, often embedded in places not typically associated with computing, such as living rooms.

IV E-BUSINESS WITH PERVASIVE COMPUTING

Computing technologies are being embedded into various information appliances or devices ranging from personal digital assistants to mobile phones and home entertainment systems. The emergence of wireless networking has allowed such information appliances to become network connected. Pervasive computing enables enterprises, telephone service providers, Internet Service Providers (ISPs), and Application Service Providers (ASPs) to leverage all of their data assets regardless of disparate protocols, language, and formats. e-business content can now be delivered effectively, efficiently, and economically to anywhere, and to any device.[7]
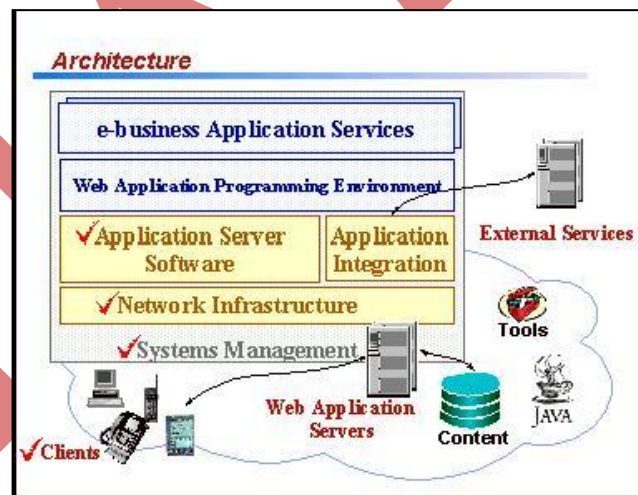
Today, professionals are conducting an increasing number of business activities outside traditional office settings, and the pervasive computing environment is large and growing rapidly:

According to the McKenna Group, the pervasive computing market could be worth $120 billion in the next 3-5 years. Pervasive computing services support the growing number of nomadic computer users. The main objective is to provide mobile users with access to the data and applications they require to be productive. [7]

V EFFICIENCY OF E-BUSINESS WITH PERVASIVE COMPUTING

The suppliers' visions of a world pervaded by invisible Web links at every level - business, social and domestic - co-exist with product announcements that amount to little more than providing limited e-business and Internet information to wireless application protocol (Wap)-enabled mobile phones.

This gap between hype and reality did not matter when business computing was just about PCs and local area networks. But mega-billions will be spent worldwide in the next decade acquiring the ownership of wireless and fiber-optic networks. Pervasive computing is what will deliver return on investment to the network carriers and backbone owners, so IT strategists need to start asking where their business benefits will come from.[8] "E-business content can now be delivered effectively, efficiently, and economically to anywhere, and to any device... [pervasive computing] provides convenient access to relevant information from disparate, unrelated sources, stored on one seamlessly integrated system." Well, not yet it can't.

We will access this information through laptop, notebook and handheld computers, pagers, "smart" phones which incorporate the functionality of PDAs, and wearable devices, such as smart badges or tags and wristwatch computers.

The services offered are equally limited and often available more conveniently and cheaply elsewhere. You can get share prices and test match scores over conventional telephones, from newspapers or the radio.If you want to know where you are, and how to get to where you're going, you can ask a policeman.[8]

VI CONCLUSION

Pervasive computing provides convenient access to relevant information and applications through a new class of ubiquitous, intelligent appliances that have the ability to easily function when and where needed. Pervasive computing is an increasingly networked world continues to affect more and more of the world's population. Pervasive computing is knocking on the door of today's economy.

REFERENCE

[1] toolkit.smallbiz.nsw.gov.au/part/15/74/316

[2] Research paper on Advertising in a Pervasive Computing Environment by Anand Ranganathan and Roy H. Campbell, Department of Computer Science University of Illinois at Urbana-Champaign.

[3] (en.m.wikibooks.org/wiki/E-Commerce_and_E_Business/Concepts_and_Definitions.)

[4] http://k.web.umkc.edu/kumarv/cs572/PCS-history.pdf

[5] (www.panteongroup.si/en/electronic-business-operations/how-the-electronic-business-operations-are-working.aspx).

[6] Research paper: Towards Pervasive Computing by:Vandana Dhingra1 and Tanvi Rustagi2 Mobile and Pervasive Computing (CoMPC–2008) .

[7] IBM: http://www.ibm.com/developerworks/library/wa-pvc/

[8] http://www.computerweekly.com/feature/Going-mobile-the-next-step-to-pervasive-computing