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Abstract: Technology of different shapes have got much race from 1960 to present. In 1970, the computer technology brought lots of faster modes of business when the faster calculations and saving data became possible. It further innovated the big information systems after 1985 when the manual work started to be converted into computerized means as computer based information systems. But one advent brought various solutions to the business and that is the miraculous advent of internet after 1992.

An internet is one of the biggest emerging Ecom technology which has facilitated the business platform in much faster and flexible standards. Due to the technology the business is advanced at an exponential rate of making life very easy and guiding to be equipped with other technological wonders of not only doing business but increasing education activities, knowledge and coordination through organization to organization and customers to customers.

The purpose of this paper is to identify emerging e-com technologies and get a sneak peak into internet and information literacy related technologies which will pull e-com any time to millions of people and push business to survive on modern business platforms. The study will focus on emerging e-com technologies that have emerged through the last decade or so. It will also focus on the current and possible applications and factors of important view which have brought significant role in business scenario.

The paper consists of five main sections: First is about the introduction, concept and definitions of the topic, Second is regarding the historical perspective of emerging technologies and identification of e-com emerging technologies and their changing phase in the faster pace of information technology and business aspects, Third focuses on the model of e-com and computer technology development. Fourth is about some examples on applications of emerging e-com technologies from available literature survey to support this research, Fifth is followed by the conclusions, recommendations, research methodology, references and bibliography.

Keywords: Emerging technologies; e-commerce an changing business patterns

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I. Introduction

History of technology development is long story of electronic business affair but following are some of the important icons which initiated and proposed the emerging technologies development in an IT age.

EDI (Electronic Data Interchange)
EDI concept is the in the emergence since 1960 in US specially. A group of railroad companies concerned with the quality of inter-company exchanges of transportation data formed an organization to study the problems and to improve it. This organization was known as the Transportation Data Coordinating Committee (TDCC). EDI has always been in the help of better business but its high cost standards are complicated and its huge complexities in the application has hindered the EDI popularity in the business. But after the advent of an internet, it is a bit popular as internet EDI activities towards business processes.

Internet & Web.
The internet pushed many companies to be connected with their suppliers, customers and competitors in particular for the purpose of better business activities. This push compelled companies to have web existence to have an edge in miraculous innovations of information technology platforms.

XML and Web service.
XML provides a development tool for defining format of the data interchange in a wide variety of business communities where web service offer an effective architecture for the business and communication initiatives. An XML and Web service are shaping in a very effective manners to all e-com technologies.

DSL
DSL brought an exponential growth in the world of e-com due to its twenty four hours communication across the world. This provides digital communication on copper wire of the local telephone network. This was announced in California 1998 but it has also a unique history when an engineers at Bell research lab devised a way to carry a digital signal over the unused frequency spectrum in 1988 but it got much popularity after the faster pace of electronic business

scenario.

M-Commerce.

The development in mobile and portable gadgets created very easy and flexible platform for companies to provide all commercial activities at their time. Mobile commerce is an extension concepts of e-com which provides the all same facilities in mobile means. This concept was the result of the boom in dot com companies which brought lots of communication on the applications via broad band mobile telephony

II. Online Scenario

In this process, an online ticketing, online banking, online selling and all the results of advancement in networked devices and web services became common phenomena. This became much popular after the areas of internet and had become ubiquitous. The banking sector is much benefited by e-com concepts, the same is the case with trading, companies having an online trades etc. The ATMs facility of banking sector is one of the emerging technologies which is being adopted by almost every body.

Technology has always been a great influence on the business patterns because of its innovation and advancement in inventions. There are lots of technological icons which are responsible to modify the methodology of business trends but computer related technologies are the major controlling icons on the world's business desktop.

Following technologies are considered as important factors.

Computer Technology (Software Based)

- Information Technology
- Information Systems
- Information Superhighways
- Information Literacy
- Information Layers

Computer Technology (Hardware based)

Computer Systems

- IT Systems
- Machines
- Man-Machine Interface
- Network Gadgets
- Communication devoices
- Mobile Phones

Business Related Technologies

- Electronic Commerce
- Electronic Business
- Electronic Marketing
- CRM
- ERPs
- SCMs

The changing business patterns are the results of customers' knowledge and preferences. The customers who are information literate and have an access to modern communication methods can check the competitor's products and order them to get products with in no time. Such thing pushes the organization to change the outdated business styles but adopt the one which is most compatible with the needs of the country.

The major changes occurred because of the following business and technological flow which mainly started after 1970 with the introduction of microchip which brought lots of capacity of maintaining and preserving customers data, faster calculation and accurate methods. This other change submerged when the information systems go much popularity of changing manual information systems towards computer based information systems.

The third one which brought lots of other changes and turned the world into one village was the miraculous advent of internet. This technology facilitated the business organization to have web existence and ubiquitous scenario. This gave birth and flourished other wonderful emerging concepts of emerging technologies.

The technologies like electronic Business, electronic commerce, and mobile business and commerce. Such flexible and worldly available facility convinced many organizations to work for eruptive and disruptive concept of technologies and started to produce not only one product line but to come up with multiple product line offerings. For example, companies who were doing internet facilities came up with software, information system packages, providing compatible machines etc.

In this way the competitors started and all companies dived into the domain of designing strategic packages and acceptable product differentiations having an hawk's eye on the competitors strategies and predictive plans. Such competition brought a very good flow of choices for the customers and the power which was with the sellers shifted to buyers because of the countless choices in every domain of items.

Despite of tremendous accomplishments of internet and communication technologies, it has also been observed that world's major business activities depend on full integration of the globe.

Customers know the product but want to reach it with in no time. In this way, companies look for such kind of solution that can satiate the need of the customers immediately, that's why companies joined the party of major business trends which include greater pervasiveness of computers continuing convergence of computing and communication, greater automation of work, faster pace of business, accelerating global competitiveness and gradual acceptance of global standards.

Following is the model which explains the trend of technology from 1960 to present indicating the changing business patterns due to the advancement in computers, information technology and e-commerce which created a base for emerging definite technologies named as emerging e-com technologies.

Technology	Years	Emerging Technologies	Business Patterns
MRP MRP-II	1960s	EDI	Coordination, Simple processes In HRM and Engineering
Computers Microchip	1970s	EDI, Terminals and Computers	Faster processes, Faster calculation Methodology improved
Information Systems	1980s	Information Systems, MIS, CBIS, ESS, and DSS	Manual Information, Coordination and other business activities, communication flow from first line to middle and top level managers
Internet Electronic Commerce	1990s	Internet, TCP/IP, WEB services, DSL, Gateways SSL and SET	Modern information Systems (ERPs), Global village, World connectivity, World coordination, Online business, CRM and SCM.
Mobile Commerce	2000 to present	Wireless, WAP Mobile technologies Micro browsers	Mobile business All activities of e-com into the mobile means
Eye Blinking Business	Future	Eye rays Eye as an infrared	The time will come when a man will blink and the transaction will happen.

The model explains the historical background of technology identifying the pace by emerging technologies which pushes to flat the business patterns in different organizations and countries.

In 1960, when the MRP (Material Requirement Planning) was being used for the purpose of coordination at smaller level in the organization and the usage of EDI was possible at that time but at lesser scale. After a while it got much advancement in coordination patterns and expanded from coordination towards faster process and faster communication

The 1970s is the most memorable time because of the introduction of micro chip which exploded the world computer technology and provided us with the faster pace, faster calculation devices and methodology of other fields was improved at satisfactory level. In this time, the EDI was also in use.

In 1980s, the time of information systems got much popularity when the manual information systems were converted into computer based information systems and many middle managers started using MIS, DSS and some ESS to know the complexities of maintaining data and communicating to top level hierarchy for structured and unstructured decision- making

The year 1992 is the most historical icon because of the miraculous and God gifted innovation of Internet which brought all human being together all over the world and people started sharing data, retrieving information and knowing what is being done in other countries of the world. This brought lots of concepts of information superhighway and technology which also facilitated the platform fro electronic business using TCP/IP for simple communication and SSL & SET protocols for secure business transactions. This got world connectivity, communication, better relationship and reaching customers with in seconds.

The era of 2000 and onward is the era of mobile connectivity, all which is possible by e-com and is converted into mobile means because of the advancement in universal mobile communication technologies.

Every time, whenever we got across with the technology innovation, we come across to know that an other small form of computer has arrived in the market and all software can be merged in it and facilitate us with almost all things which are possible through desktop, laptop and palmtop computers.

The future is the talk of innovating smaller sizes and shapes of computers which may contain everything as communication, business transactions and sharing heavy data in particular. The futuristic amazing and interesting thing will be that small shape of technology or computers which may easily accommodate in our eye, so it will be as Eye Blinking Business when humans will look to do a transaction, they will just be required to blink and the moment they will blink, the transaction will take place. We can imagine anything and any thing can happen. Thanks to the inventors, developers, technologists, teachers and researchers for bringing every time some thing very amazing.

III. Applications of Some Emerging Technological Activities

Following are some examples where emerging and different computer and IT related activities which are taking faster paces to modify the business methods.

- The companies such as General Motors, Sears and K-Mart also addressing the inefficiencies of inter-corporate document movement by using their own electronic (but proprietary) systems with their major trading partners. By the mid 1980's, K-Mart's system-

EPOS was being used by over 500 companies. Where was the problem? The problem lay in the fact that each system was specific to the company that in a proprietary sense had no standard except. A hypothetical company in the late 1960s doing business with GM, Sears and K-Mart therefore needed three different system interfaces to cope up with such complexity and they got solution because of systems providing common interfaces.

- The story with the grocery industry was different. One EDI historical example is Super Value, a large American grocery chain. Because they had to first deal with larger "within-the-company" EDI issues, they recognized early on the need for industry specific standards. They felt that a universal standard was impractical and unnecessary for the technology levels that were available and the extent of their needs. In the 1970's, several industries sponsored a shared EDI system that they usually turned over to a third party network. In some cases, the shared system was developed by the third party for the group of common companies or industry trade group. Examples of this early sharing include IBM IVANS, which the U.S. property and casualty insurance industry sponsored. Another was ORDERNET, sponsored by the pharmaceutical industry.

These industry trade group systems had the same disadvantage as the company proprietary EDI system: they were standard, but limited in scope, and unable to communicate with other trade group EDI systems. (ORDERNET, for example, could not communicate with the transportation carrier's EDI system.) In 1973, the TDCC decided to develop a set of standards for EDI between companies and to invent a so-called "living standard"-i.e: a standard that included standards on how to change the standards! This resulted in the first inter-industry EDI standard in 1975covering air, motor, ocean, rail and some banking applications. What evolved included generic formats for general business ANSI X12, first published in 1981.

- European development of TRADACOMS, ODETTE and JEDI started around 1984. In 1985, work started on EDIFACT (EDI for Administration, Commerce & Transport), an international standard through the auspices of the United Nations.
- Federal Express executives say that in some areas, the company increased productivity 30 percent in the early 1980s when it launched its Digital Assisted Dispatch System. FedEx was able to more efficiently route pick up and deliveries, keeping couriers on the road. Coupled with the Super Tracker, a handheld device that communicates location, shipping, and other information about deliveries to customers and FedEx, the company was able to pick up and deliver packages in real time after 1986. One of the immediate benefits was that the wireless system eliminated the need to write down numerous addresses per day, saving time and money.
- Office Depot teamed with Aether Systems to develop a way to track the retailer's vehicle fleet and to capture customer signatures via a Palm- or Pocket PC-based handheld from Symbol Technologies. Office Depot cannot charge a customer until a signed bill is logged in the system. With the mobile device, the signature and bill are shipped to the Web and delivered, in real time, back to the customer. The system has rapidly improved Office Depot's cash flow.
- Networkcar is taking advantage of legacy technology and warehoused information and transporting them to a wireless world. The newly launched company sells a plug-in device that connects to computer diagnostic ports that are standard-issue in cars made after 1996. The device beams vital signs to a dealer, who can remotely diagnose or spot trouble. The advantage is that dealerships can achieve competitive advantage by maintaining a closer bond with their customers.
- Kemet Electronics is the nation's largest manufacturer of tantalum capacitors (small heat- and corrosive-resistant components that regulate electricity in devices such as radios and DVD players). The firm made a deal with IBM's pervasive computing division to deploy a wireless network that allows its sales force to access Lotus-based e-mail, calendar, scheduling, and other corporate information through PDAs, pagers, and cell phones. The system has increased the effectiveness and efficiency of Kemet's salespeople.
- California utility firm, Sempra Energy, is equipping its engineers with wearable computers. The engineers currently return to an office to enter information about heating, ventilation, and air conditioning units run by big users such as hotels. The wearable computers allow engineers to transmit and receive data and to make necessary equipment adjustments without leaving customer sites. The company says the devices will save a "ton of money."
- iMetrikus is an online medical treatment provider that is planning on taking their monitoring services mobile during 2001. The company allows doctors and patients online access to medical records. Patients can report any medical problems and update their health-care provider on what type and quantity of drugs they are taking. This is information that physicians routinely monitor. One iMetrikus client, age 62, checks his blood-sugar level as many as eight times per day, regularly uploading results onto the Web so his health-care provider can monitor his status. When he is on the road, which is often, he ducks into cyber cafés when possible or stops at public libraries to obtain some free Internet time. He complains about the trouble he has maintaining a virtual link to his physician when he is on the road – a link that grows more tenuous the deeper he goes into back roads. But he sees hope in wireless. As a Verizon cellular subscriber, he says he had a decent connection throughout most of his travels, although reception was spotty in parts of Canada.

The above examples have been collected from the available literature survey to support the concept of this research and to identify some emerging e-com technologies aspects in this fast paced changing technological era.

IV. Research Methodology

The research is an exploratory in nature which is based on literature survey, observation and some unstructured interviews to explore the nature and development of emerging e-com technologies in the developed and networked e-arena. Since the literature on e-com emerging technologies is not much available, therefore electronic communication, electronic business. Computer technologies and its development and strategic methods are mostly studied to reach and find the proper data of the topic.

V. Conclusion

Emerging Ecom Technologies are always at the pace of development because of the compatible development in other computer and IT related technologies. But emerging e-com technologies will always be on the top because of the major pertinence of business activities.

Such technologies are always a very interesting topic for IT specialists to innovate and adopt for the betterment of business. In this way the technology adoption of prevailing trends and needs have become an essential part of today's top notch gurus of the organizations.

VI. Recommendations for Prospective Companies

- Companies must be fluent with the flexible and worth adopting emerging technologies in order to achieve an edge in various issues.
- Companies must adopt the changing patterns of emerging technologies with the faster flow of technological advancements in the areas of networking devices and databases in particular.
- Companies must cope up with an IT strategy of updating some major information layered processes which are very much pertinent with modern business and strategic analysis of technology decisions.
- Companies are required to watch changing business patterns through the study of consumer preferences and their trend towards technology regarding e-com and m-com positions
- Organizations of today's age are also required to have IT experts having enough knowledge of current IT systems as to avoid from any delay to the adoption of emerging e-com technologies