E-Commerce

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ABSTRACT

E-commerce (Electronic Commerce or EC) is the buying and selling of goods and services on the Internet, especially the World Wide Web. In practice, this term and a newer term, e-business is often used interchangeably. For online retail selling, the term e-tailing sometimes used.

INTRODUCTION

In 1886, a telegraph operator was able to obtain a shipment of watches that was refused by the local jeweler. Using the telegraph, he sold all the watches to fellow operators and railroad employees. Within a few months, he made enough money to quit his job and start his own store. The young man's name was Richard Sears. His company later became Sears, Roebuck.
The meaning of electronic commerce has changed over the last 30 years. Originally, electronic commerce meant the facilitation of commercial transactions electronically, using technology such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). These were both introduced in the late 1970s, allowing businesses to send commercial documents like purchase orders or invoices electronically. The growth and acceptance of credit cards, automated teller machines (ATM) and telephone banking in the 1980s were also forms of electronic commerce. From the 1990s onwards, electronic commerce would additionally include enterprise resource planning systems (ERP), data mining and data warehousing.

Perhaps it is introduced from the Telephone Exchange Office, or maybe not. The earliest example of many-to-many electronic commerce in physical goods was the Boston Computer Exchange, a marketplace for used computers launched in 1982. The first online information marketplace, including online consulting, was likely the American Information Exchange, another pre-Internet online system introduced in 1991.
Although the Internet became popular worldwide in 1994, it took about five years to introduce security protocols and DSL allowing continual connection to the Internet. And by the end of 2000, a lot of European and American business companies offered their services through the World Wide Web. Since then people began to associate a word "ecommerce" with the ability of purchasing various goods through the Internet using secure protocols and electronic payment services.
"Ecommerce services are the silver bullet that will enable companies to take advantage of the true business opportunities on the Web." (**Traci Gere, Analyst, The New York Times**).

E-Commerce is like any other business, developing a business over the Internet requires many of the same major activities as starting any other business. You should do some basic business planning. After all, you need a product. You may need funding to get your business going. You need customers. You need to market products to your customers. You need strong customer service. You need to manage purchases by customers, finances, staff and other resources.
Not all products are very compatible to sales over the Internet, but there are some features unique to e-commerce. Not all products are real compatible to be sold over the Internet. For example, they may require a lot of face-to-face selling. They may cost a lot to ship (a primary practice in e-commerce is that customers buy products, and you ship the products to them). You need to make sure that, because your product may be advertised to the world, that you remain in control of your ideas, or "intellectual property".

Think of E-Commerce and the first few features that strike any mind are – a global marketplace – increased sales – increased profits! Not that you start claiming better margin of profit online, but because various expenses relating to marketing, promotional material, order processing, customer care, inventory management, information storage, telecommunications, considerably slash down.

E-Commerce offers tempting but economical boost to any size or kind of business. By opting for E-Commerce, you can expand your market margins to global horizons or squeeze them to highly focused market segments, as per subjective business acumen and discretion.

Quality E-Commerce services collect and manage valuable customer-related information, including customer's ordering patterns, to build a comprehensive customer database. This database vitally sharpens your marketing and promotion strategies to be remarkably on target.

E-Commerce aids you in minimizing supply chain inefficiencies, bringing about reduced inventory requirement and lessened delivery delays, thereby rendering you more confident about your business collaborations with your suppliers and service companies. E-Commerce inherently streamlines and automates the entire backend business process, assimilating speed and efficiency to your business activities.

As you introduce E-Commerce facility to customers, you render their shopping experience highly fluent and convenient. E-Commerce seems all the more indispensable for your customers in the wake of consistently shrinking time with them to spare for shopping offline. What's more, online shopping lets your customers reap benefits of online economies, as they often pay lesser price for identical products/ services available offline.

E-Commerce-based business benefits the society as well! As your onsite manpower requirement reduces, it lessens the burden on infrastructure and lowers demand for elaborate office complexes and spacious parking lots.

As good as it may sound, E-Commerce has its own share of obstacles too that hold it back from assuming its full potential. To begin with, Internet in itself is still to touch the lives of a large chunk of people as an integral way of life. There is tangible privacy and security issues that keep people on guard, as they face a dilemma each time they need to divulge highly personal information online, as and when they transact online.

Non-standardized protocols for certain processes, insufficient telecommunications bandwidth and ever-evolving software tools (with incrementing versions), are some of the technical issues that contain E-Commerce from being a seamlessly integrated component of the contemporary organizational IT systems.

While technical limitations are completely resolvable, non-technical issues including people's resistance to change and lack of trust for faceless and paperless transactions, is bound to take its due time before it completely erodes. In fact, E-Commerce is fast catching up with the rest of the world, as USA online markets lead them by example.

E-commerce can be divided into:

- E-tailing or "virtual storefronts" on Web sites with online catalogs, sometimes gathered into a "virtual mall"
- The gathering and use of demographic data through Web contacts
- Electronic Data Interchange (EDI), the business-to-business exchange of data
- E-mail and fax and their use as media for reaching prospects and established customers (for example, with newsletters)
- Business-to-business buying and selling
- The security of business transactions

The Virtual Storefront and the Virtual Mall

As a place for direct retail shopping, with its 24-hour availability, a global reach, the ability to interact and provide custom information and ordering, and multimedia prospects, the Web is rapidly becoming a multibillion dollar source of revenue for the world's businesses. A number of businesses already report considerable success. As early as the middle of 1997, Dell Computers reported orders of a million dollars a day. By early 1999, projected e-commerce revenues for business were in the billions of dollars and the stocks of companies deemed most adept at e-commerce were skyrocketing. Although many so-called dotcom retailers disappeared in the economic shakeout of 2000, Web retailing at sites such as Amazon.com, CDNow.com, and CompudataOnline.com continues to grow.

Market Research

Market research is the process of systematically gathering, recording and analyzing data and information about customers, competitors and the market. Its uses include helping create a business plan, launch a new product or service, fine tune existing products and services, and expand into new markets. Market research can be used to determine which portion of the population will purchase a product/service, based on variables like age, gender, location and income level.

In early 1999, it was widely recognized that because of the interactive nature of the Internet, companies could gather data about prospects and customers in unprecedented amounts -through site registration, questionnaires, and as part of taking orders. The issue of whether data was being collected with the knowledge and permission of market subjects had been raised. (Microsoft referred to its policy of data collection as "profiling" and a proposed standard has been developed that allows Internet users to decide who can have what personal information.)

Electronic Data Interchange (EDI)

EDI is the exchange of business data using an understood data format. It predates today's Internet. EDI involves data exchange among parties that know each other well and make arrangements for one-to-one (or point-to-point) connection, usually dial-up. EDI is expected to be replaced by one or more standard XML formats, such as ebXML.

The National Institute of Standards and Technology in a 1996 publication defines Electronic Data Interchange as "the computer-to-computer interchange of strictly formatted messages that represent documents other than monetary instruments. EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media.” It goes on further to say that "In EDI, the usual processing of received messages is by computer only. Human intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations. For example, the transmission of binary or textual data is not EDI as defined here unless the data are treated as one or more data elements of an EDI message and are not normally intended for human interpretation as part of online data processing." Kantor Michael; James H. Burrows. "ELECTRONIC DATA INTERCHANGE (EDI) ". National Institute of Standards and Technology.

E-Mail, Fax, and Internet Telephony

E-commerce is also conducted through the more limited electronic forms of communication called e-mail, facsimile or fax, and the emerging use of telephone calls over the Internet. Most of this is business-to-business, with some companies attempting to use e-mail and fax for unsolicited ads (usually viewed as online junk mail or spam) to consumers and other business prospects. An increasing number of business Web sites offer e-mail newsletters for subscribers. A new trend is opt-in e-mail in which Web users voluntarily sign up to receive e-mail, usually sponsored or containing ads, about product categories or other subjects they are interested in.

Business-to-Business Buying and Selling

Thousands of companies that sell products to other companies have discovered that the Web provides not only a 24-hour-a-day showcase for their products but a quick way to reach the right people in a company for more information.

The Security of Business Transactions

Security includes authenticating business transactors, controlling access to resources such as Web pages for registered or selected users, encrypting communications, and, in general, ensuring the privacy and effectiveness of transactions. Among the most widely-used security technologies is the Secure Sockets Layer (SSL), which is built into both of the leading Web browsers.

Secure Electronic Transaction (SET) is a standard protocol for securing credit card transactions over insecure networks, specifically, the Internet. SET is not itself a payment system, but rather a set of security protocols and formats that enables users to employ the existing credit card payment infrastructure on an open network in a secure fashion.

SET was developed by VISA and MasterCard (involving other companies such as GTE, IBM, Microsoft, Netscape, RSA and VeriSign) starting in 1996. SET is based on X.509 certificates with several extensions. SET makes use of cryptographic techniques such as digital

certificates and public key cryptography to allow parties to identify themselves to each other and exchange information securely. SET uses a blinding algorithm that, in effect, lets merchants substitute a certificate for a user's credit-card number. This allows traders to credit funds from clients' credit cards without the need of the credit card numbers.

Combining a long history with the latest technology, e-commerce is the most popular application of the moment. Presales, encryption, customer support--they're all part of the mystique of electronic commerce. But the real lure is undoubtedly the money.

We're all in it for the money. Commercial interests are the largest segment of the Internet and will continue to fuel its growth. Think of all those documents with little dollar signs on them that companies deal with on a daily basis. Now imagine them all as bits flowing automatically in and out of their respective databases--no paper, no phone calls, no faxes. That was the promise of EDI.

R on Koskinen, marketing director for AT&T's SecureBuy service, explains: "Business-to-business e-commerce takes many different forms. So, as such, you can consider EDI business-to-business e-commerce. You can consider some types of message-enabled applications to be facilitated for business-to-business e-commerce. You can also look at Web-based catalogs that provide features of functions that are necessary for businesses to sell to other businesses as business-to-business e-commerce."

No matter how you slice it, your systems will have to exchange legal documents related to the transparent transfer of goods and services. The Internet provides ubiquitous, high-speed access to information. It offers a platform-independent means to exchange information with trading partners. Where EDI was primarily the exchange of documents between application subsystems, such as order entry or accounts payable, Internet-based e-commerce casts a wider net: Documents are exchan ged in real time; your customers or partners may be as likely to use their browsers to access your system as to use a local system; and transaction flow follows a matrix of user-to-application and application-to-application paths. EDI is faceless; no common user interface or mechanism addresses what the Web does so well: promotions links, editorial content, integration with internal systems and intensive personalization access. Customers can help themselves--and get fast responses to inquiries and access to complete information.

CONCLUSIONS

E-commerce has grown significantly during the past 5 years. E-commerce has not only changed the way consumers view their purchasing power but also help skyrocketed the economy. More and more businesses are during their business over the web. Business to business transactions are at their peak and it is predicted it will grow even more! E-commerce is a helpful technology take gives the consumer access to business and companies all over the country and the world but with this access there comes a price. Once consumers and businesses realize some of the dangers of e-commerce, there could be fewer incidents of identity theft and credit card fraud. Hopefully in the future, these issues can be rectified.

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