The Role of Commercial Websites in the Improvements of E-Business

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Abstract - **Electronic Business (e-Business) is revolutionizing the way of communication between internal and external stakeholders in an organization. E-business can lead to competitive advantage and at the same time, increase profitability. There are several factors resulting on the success of e-business. One of the most important factors is trust. Acquiring customers' trust depends on many things that an e-business controls. Some relating factors for gaining customers' trust are: appeal of the website, product/service offering, branding, quality of service, and trusted seals.**

The paper seeks to address industry uncertainties and consumer concerns about commercial Internet sites by developing a framework identifying factors and facilities for business-to consumer web sites. The framework is based on a broad literature review ranging from consumer adoption of technology-based innovations to evaluations of web sites as well as a review of internationally recognized leading examples of Business to Consumer web sites.

The evaluation framework, consisting of a sample study of 25 web sites was considered. The Survey was conducted for 750 merchants and 750 buyers. This paper presents details of the framework's and survey aims to find the demand for the products, security involved, mode of advertisement, suggestions from buyers and sellers.

Keywords*: e-Business, trust, website, quality of service.*

I. INTRODUCTION

The World Wide Web has emerged as a promising medium for electronic commerce and thousands of "dot. com" and "brick and mortar" organizations have set up commercial websites to do business over the Internet (Lightner, 2004; Duffy and Dale, 2002; O'Connor and O'Keefe, 1997). The commercial websites hence deployed have the potential to support supply chain operations in general and procurement in particular (Gunasekaran and Ngai, 2004). Today, business-to-business transactions account for the largest proportion of the transactions conducted over the Internet (Chakraborty *et al.*, 2002). Clearly, electronic commerce over the Internet has offered important advantages including a more efficient way to conduct business transactions for buyers and vendors alike (DeLone and McLean, 2004; Chakraborty *et al.*, 2002; Bakos, 1997; Barua *et al.*, 1997). In this context, commercial websites play a central role. As the importance of commercial websites increases, so does the need to assess the factors associated with their success. Previous research on commercial websites has very often focused on quality and effectiveness issues and has examined the key properties that improve online buyers' satisfaction, boost traffic generation or increase the likelihood of online purchase (Tarafdar and Zhang, 2006; Shchiglik and Barnes, 2004).

This research goes beyond the simple investigation of the highly desirable attributes that contribute to website quality or effectiveness. Focusing on the services web systems can provide, this study analyzes the functionalities of commercial websites used for electronic procurement and links them with the benefits as perceived by users and with relevant business operations. For organizations engaged in electronic commerce, managers must make decisions about the design of commercial websites and about the (re)design of the business operations hence supported. In this context, managers must balance their business strategy and operations between "pure play electronic commerce" and "brick and mortar commerce" (Bahn and Fischer, 2003; El Sawy, 2001). Managers must also justify the cost of developing and maintaining commercial websites, cost which increases considerably as advanced functionalities are added (Rao *et al.*, 2003; Vinocur 2002). Commercial websites have long been considered as an advertising media and traditional models of advertising persuasion have been successfully transposed to understand their effects (Karson and Fisher, 2005).

II. E-BUSINESS

The term "E-business" is defined as the use of information and communications technology to change and improve business relationships [Hartman]. The "business relationships" referred to are not only limited to those between the business and its customers, suppliers, etc., but also include those with employees and governmental institutions. With respect to the technology part of the definition of e-business, the Internet is an important enabler, giving a host of new possibilities. Literature (see for instance [Hartman]) describes many advantages. Examples are the strengthening of relationships with customers (termed "customer relation management") or increasing their market. Process efficiency improvement is also often quoted.

2.1 E-business in relation to the customer

In fact this is the sales side of the construction company. In this case e-business can improve the relation with the principal. Examples of using the Internet are: gathering customers' expectations (principal, tenants); providing information about the progress of the building process; handling complaints; creating and operating a helpdesk, etc. Specifically in housing the Internet can be used to facilitate communication between the customer and the contractor about changes in design. Electronic support in the form of project webs, optionally with workflow functionality, will lead to a better control of the whole process and will result in less confusion and disputes because of missing and failed communication.

2.3 E-business in relation with suppliers

At the purchase side of the construction company relevant e-business areas are E-procurement (including e-ordering) and E-tendering. E-tendering concerns the support of the subcontracting process. After placing the tender information on the Internet, potential subcontractors can subscribe to the bid. Advantages are enlargement of the market range and aggregation of different tenders, which will lead to lower costs.

III. RESEARCH PROBLEM

Finding the availability of services by the customers, determining the customers needs by the sellers, providing a secured framework for e-business, increasing the ease of the use of the sites are the major areas in the research problem. They are handled by the following hypothesis:

Hypothesis 1: Type of products or services extended influence the e-business solution.

Hypothesis 2: Comprehensiveness of the implemented e-business solutions positively influences (improve) the business results.

Hypothesis 3: More user-friendly websites improve e-business.

Hypothesis 4: Improper maintenance of delivery time of the product or service will affect the market for e-business.

Hypothesis 5: A more secured framework will improve e-business.

The results of this hypothesis are tabulated to find the various results of the analysis and survey.

IV. OBJECTIVE AND SCOPE

The primary objective of the research is to study the existing status of the commercial web sites and suggest measures for the better service to the customers. The research provides a better solution in various fields of commercial websites where an improvement is required. This aims to extend the scalability of the commercial sites and provides a standard architecture for them.

The scope of the research is to provide more functionality of the commercial sites to the end users to improve e-business. This implies that the existence of the sophisticated tools, features functionality of the websites is made more user-friendly for the customers and sellers. This widens the market range of the products in the scenario.

V. LITERATURE REVIEW

Research on commercial websites has very often focused on quality and effectiveness issues and has either developed instruments used to capture website success or examined the key properties that increase online buyers' satisfaction [1] or traffic or online purchases (Shchiglik and Barnes, 2004). Research focusing on the effectiveness of commercial websites, has identified information quality, navigability, usability, personalization capability, security and reliability as highly desirable features that make buyers more likely to visit and/or to purchase at a given website (Tarafdar and Zhang, 2006). Little or no research has

focused on the functional design of commercial websites that improves their economic efficiency.

VI. RESEARCH METHODOLOGY

This study employs both analytical and descriptive type of methodology. The study is conducted in two stages format, with a preliminary pilot study followed by the main study:

6.1 Study area

This research has been divided into two broad areas namely Analysis and improvement measures. In Analysis phase, buyers and sellers of a few sample sites are identified and an on-line survey was conducted among them. This is used to find the major drawback areas in majority of the sites and to analyze the list of products commonly purchased and sold in commercial websites and the level of security involved in them. In the second phase, the improvement measures to be considered to overcome the drawbacks are to be found. The way of implementing them in future are to be analyzed and examined.

6.2 Site Selection

To carry out these activities, an on-line survey is conducted among the customers and buyers of the commercial websites [2] that are selected randomly. The survey aims to find the demand for the products, security involved, mode of advertisement, suggestions from buyers and sellers.

The survey results provided an opportunity to understand customer problems, reasons for certain products not being sold in the commercial transactions. Various analysis techniques were also used. They reflect the best payment method practiced, time taken to complete a transaction, security measures taken in a transaction, suitable delivery mode for particular range of products, type of products sold more often and the reasons for them. It also provided the solution to bridge the gap between the sellers and buyers. Also, it suggested measures to improve the commercial web sites and make them move user friendly. The survey results provided a better solution to the research problem.

To implement a higher level of security [3] in the web sites, more sophisticated software architecture was framed. The emphasis is that there could be just one matter website taking care of all transaction among all the websites available. This creates a digital signature [4] of the merchants and the buyers. Any buyer is allowed to buy any from any of the merchants (Asokan 2001). Their identity as a member in the master website is sent to all the buyers. Also the need to pay for the payment gateway is done by the single master website and every merchant need not take care of this payment. Hence, it empowers more security (Anil Kumar 2005). A sample of 25 web sites was considered. The survey was conducted for 750 merchants and 750 buyers.

VII. CONCLUSION

This paper describes the development and improvement of technologies have brought successful towards e-business. Thus, e-business companies should build trust and using security during the business transaction. To provide value to the customers through service and goods provided, research found that companies should build up trust and security to protect their customers.

The specification is based on theoretical and empirical sources that identified key elements for retail web sites, including types of information presented, levels of functionality provided and degrees of alignment with consumers' requirements. The web site evaluation framework proposed may enable firms to assess their web site in comparison with other sites and to identify a path for development of a consumer-oriented, innovative Internet service. The framework is intended to enable clear identification of options, opportunities and their implications for web site development. Researchers with a broad range of interests from organizational transformation to web site design may also obtain benefit from a web site evaluation framework developed on a firm theoretical and empirical base.

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other government bodies. He has given more than 50 seminar talks at various technical institutions. He has guided 25 Masters level projects and is research director for 11 Ph.D candidates. His biography was included in MARQUI'S INTERNALTIONAL, New Jersey, USA "Who is who in the World" in the year 1999 and was awarded "Outstanding achievement award" by International Biography Centre, Cambridge, UK. He is the life member of 3 professional bodies.

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Mohammed Ali Hussain received his M.Tech (I.T) from Allahabad Deemed University, India in 2005. He is pursuing his Ph.D., in Computer Science & Engineering from Acharya Nagarjuna University, Guntur, Andhra Pradesh, India. He is currently working as Assoc. Professor & Head in the Department of Computer Science & Engineering in Sri Sai Madhavi Institute of Science & Technology, Mallampudi, Rajahmundry, Andhra Pradesh, India. His research interests are Web Designing and Communication Networks. He has published large number of papers in different National & International Conferences and International journals. He also served as a Program Committee (PC) Member for many International Conferences. He is at present Editor in Chief for International Journal of Research and Reviews in Ad hoc Networks (IJRRAN) and Editorial Board Member for International Journal of Computer Technology and Applications (IJCTA), International Journal of Computer Trends and Technology (IJCTT), International Journal of Sensor Networks and Data Communications (IJSNDC), Journal of Engineering and Computer Innovations (JECI), and Technical reviewer of many International journals. He is a member of International Association of Engineers, IACSIT and ISTE.

Dr. K.V.Sambasiva Rao pursued his M.E from BITS, Pilani and Doctorate from IIT Delhi. He has a total of 24 years of rich experience comprising teaching, research and industry. He has published 4 books, 18 papers in international and national journals. Earlier, he has worked at V.R.Siddhartha Engineering College, Vijayawada at various capacities for 13 years. His contributions as professor and Head of the Department of CSE at V.R.Siddhartha Engineering College, Vijayawada were instrumental, remarkable and wonderful. Presently he is working as Principal & Professor at M.V.R College of Engineering & Technology, Paritala, Vijayawada, A.P., India. He has conducted numerous national conferences, workshops with the support of AICTE, DST and