Editor
Bel G. Raggad, Ph.D.
Pace University, NY

Associate Editors
Abdur Choudhary, Ph.D.
Bell Labs, NJ
Kamal Jedidi, Ph.D.
Columbia University, NY
Charles Tappert, Ph.D.
Pace University, NY
David Sachs, Ed.D.
Pace University, NY

Aims and Scope
The Journal of e-Business and Information Technology is a semiannual international journal which aims to publish articles of high quality dealing with how online business technologies relate to the information technology, addressing various e-business forms and their evolution, and covering all aspects of IT, particularly those touching the Internet.

The intention of the Journal of e-Business and Information Technology is to help the local and global business communities to efficiently exploit IT towards the creation of business value in e-business. The journal welcomes all types of applied research studies in global computing that add value to e-business owners, customers, developers, and evaluators. That is, applied studies in IT, online business technologies (all e-business forms, e-commerce, etc.), and Internet security are particularly sought.

Subscription Fees (see form in announcements):
Individual membership: $32.00 per year, U.S.A.
$42.00 per year, International
Library subscription: $120.00 per year, U.S.A.
$140.00 per year, International

Please direct all subscription inquiries, address changes, and other business correspondences to:

Journal of e-Business and Information Technology
School of Computer Science and Information Systems
186 Bedford Road
Pleasantville, New York 10570

Claims for missing issues will be honored free of charge within three months after the publication of the issues.

© 2000 by Pace University

Pace University shall obtain the copyright for all Journal of e-Business and Information Technology’ articles except for those of the public domain.
Journal of e-Business and Information Technology

Volume 04 Number 01, Fall 2003

From the Editor-in-Chief

A Study of Customer Relationship Management in the E-Business Characteristics of the Small Business Market of the Hudson Valley of New York State
James P. Lawler, Pace University ..................................................4

Strategic Distribution within the Context of e-Commerce: the Effect on Distributors and Re-Sellers
William T. Rupp & Alan D. Smith, Robert Morris University ..............10

Strategic XML and Enterprise Management Considerations
Alan D. Smith & William T. Rupp, Robert Morris University .............23

Workplace E-mail Internet Privacy Policies: a Multi-Firm Analysis
Alan D. Smith & William T. Rupp, Robert Morris University .............31
A Study of Customer Relationship Management in the E-Business Characteristics of the Small Business Market of the Hudson Valley of New York State

James P. Lawler, lawlerj@aol.com
Pace University
School of Computer Science and Information Systems
New York, New York 10038-1598

Abstract

In this period of constrained economic conditions, this introductory study expands through observation, regression and survey an analysis of customer relationship management in the interface characteristics of e-Business Web sites in the small business market, focusing on the Hudson Valley of New York. The Hudson Valley is a critical economic region of the Northeast Corridor that is attempting to become a hub for e-Business. Though investment in customer relationship management technology is limited under current conditions, the preliminary analysis of this study indicates that the small business market, typified by the Hudson Valley, is enabled to compete effectively and innovate further in this technology. The analysis is beginning to contribute insight into the competitive dynamics of customer relationship management in small business Web sites, in contrast to the features of large sites frequently cited in the literature. The study furnishes a new framework to research customer relationship management in the small business market in the current economy.

Key Words: Customer Relationship Management (CRM), Customer Service, e-Business, e-Commerce and Small Business Market

Introduction

The fast implementation of e-Business, along with the continual investment in Web sites, is decreasing in large and small businesses, due to various cultural, economic, financial, political and technological conditions. Businesses are especially uncertain as to the effects of recent international events on the economy. Interestingly, however, research from Information Week indicates customer spending on Web sites of large businesses increasing to $85 billion in 2002 (excluding travel industry) [2], implying the importance of e-Business in large businesses.

The importance of e-Business and customer relationship management in small businesses in the slowed economy is unclear in the research, as there are difficult definitional issues and confusing, sometimes limited, information. Financial limitation and lower risk tolerance constrain small business sites. Still, research from the Gartner Group indicates the small business market, when commingled with medium sized businesses, increasing the spending of technology 2% to 5% in 2003, with only 2% having decreased e-Business spending in 2002, in contrast to 2001 [1]. The Aberdeen
Group indicates this market increasing specific spending of customer relationship management technology 14% in 2003 [3]. E-Business is not considered a luxury in these businesses.

The focus of this study is to therefore analyze in stages the importance of current customer relationship management in the e-Business characteristics of small businesses and organizations, specifically sites in the Hudson Valley of New York, a key economic region planned for expansion by the state government of New York. The study demonstrates and quantifies that B2C e-Business is as important for the future of small businesses as large businesses, though tempered by financial sobriety and the sluggish economy.

Small Business E-Business Market

The small business market comprises approximately 5 million entities in the United States, averaging less than $50 million annually [1]. Small businesses in the study consist of the below:

- Small Businesses and Organizations of 20 to 99 employees, in 0.5 million entities;
- Very Small Businesses and Organizations of 5 to 19 employees, in 1.6 million entities;
- Small Offices of Businesses and Organizations of 1 to 4 employees, in 2.7 million entities [1].

Of small businesses of 20 to 99 employees, engaged in e-Business, 25% contend that over half of revenues were derived from Internet-based sales in 2001, while of the very small businesses of 5 to 19 employees, combined with small offices of 1 to 4 employees, approximately 50% contend that half of their revenues were derived from the Internet in 2001 [1].

E-Business in this study is defined as the process of exchange, interaction or transaction effected over a computer-mediated network between a small business and a consumer, which enables customer relationship management on the Web.

Most small businesses and organizations that have personal computers have connectivity to the public Web, and most of these entities are engaging in some characteristics of B2C brochure, pre-commerce or commerce e-Business on their Web sites. Success is frequently determined on pre-commerce and brochure sites by only simple functionality or displayed information that potentially leads to sale transactions in the stores.

Characteristics of Small Business Web Sites
The customer relationship management characteristics of e-Business analyzed in this study are elements of customer interface to the Web sites. Rayport and Jaworski present these elements to include the following:

- **Context**, defined as the depth of comfort, ease of navigation and help on the site;
- **Content**, depth of information on the products and services of the small business;
- **Communication**, degree of dialogue of the customer with the small business;
- **Connection**, degree of connecting from and to other affiliated sites of the small business;
- **Community**, degree of interaction with other consumers sharing similar interests;
- **Customization**, degree of small business and customer driven personalization of the site;
- **Commerce**, extent of commercial transactions effected on the site [5].

These elements are similar to those included in other research, such as the Yankee Group [6].

**Research Methodology**

The research methodology of the study employed a random sample of small business entities in the Albany, Columbia, Dutchess, Greene, Orange, Putnam, Rensselaer, Rockland, Ulster and Westchester counties of the New York Hudson Valley, in three stages of analysis. In stage 1a, 42 entities were selected as B2C sites and observed and analyzed by the author for their e-Business customer interface characteristics of context, content, communication, connection, community, customization and commerce, applying a scale of low, intermediate and high functionality. In stage 1b, the sites were analyzed in a collaborative effort of students from an e-Commerce course in *Customer Relationship Management: Processes and Technologies*, at Pace University in New York City. The students were already adult consumers and residents in the communities of the small businesses. 21 students contributed to the analysis of the 42 sites and actually expanded the original sample, based not only on observed functionality, but also on integration of the customer relationship management principles of the course.

The methodology also included a sample of small B2C Web sites in the Mercer, Middlesex and Monmouth counties of New Jersey and the Chester and Montgomery counties of Pennsylvania, counties similar to those of the Hudson Valley, that were analyzed comparatively, in order to ensure initial reasonableness of the study.

**Analysis of Small Business Sites**
From stages 1a and 1b of the study, the analysis indicated that most of the sites have high context (74%), content (63%) and owner communication (58%), intermediate affiliated site connection (50%), and low consumer community (26%), customization (24%) and commerce (29%), and the Pennsylvania and New Jersey sites indicated similar results.

The study requires further analysis in a forthcoming stage 2 of the study to test the below hypotheses:

H1. Web sites of small businesses have higher content and context interactivity characteristics to enhance consumer experience, and higher communication characteristics to correspond with owners of the sites.

H2. Web sites of small businesses have intermediate connection characteristics to affiliated sites, but lower community characteristics of connecting consumers to other consumers.

H3. Web sites of small businesses have lower functionality in complex customization and commerce characteristics, except when linked to larger businesses.

These hypotheses will be tested through SPSS statistical interpretation. In a further stage 3 of an advanced study, the sites will be analyzed by new students based on an instrument that will survey the small business owners on their customer relationship management strategies on the Web. Though results of the full study will not be final until completion of this third stage, the preliminary results are immediately helpful, however, in initially analyzing the small business market.

Implications of Study

The preliminary results of the study imply a need for small businesses to establish a controlled but continued e-Business customer relationship management strategy. The small business market is frequently focused on tactical, not strategic, technology considerations. Nevertheless, small businesses, very small businesses and small offices, in order to compete as the “local store” with other businesses that have technological foresight, have to consider future incremental investment in innovation that will enable their Web sites to further differentiate enhanced customer relationship. Their B2C front-sites can be helped if integrated with new back-end, cost justified, customer relationship management (CRM) suites of sales, customer service and marketing systems, tailored to small businesses, to improve the click and mortar personal channels of the small businessperson.

Small businesses limited financially may be helped in eventually enhancing the CRM characteristics of their B2C sites, in that CRM suites, including customer lead generation technology, are increasingly less expensive and faster to install than those in large businesses. Gartner research estimates expenditures of $150.0 thousand or less [1]. Of immediate interest, CRM technology may be outsourced inexpensively to local Web services or more specialized e-Business service providers that customize the CRM suites,
as typified by salesforce.com, but only when the outsourcing risk is managed satisfactorily by the providers.

This transformation is facilitated in the innovation of network-delivered services, which tailor the back-end component infrastructures of small B2C Web sites.

Eventually, small businesses will need to evaluate e-Business as an enabling innovation technology. The full potential of small commerce innovation, such as in Oracle Small Business Suite and in other CRM suites, remains to be realized by rudimentary pre-commerce and brochure sites, from both revenue generation and cost savings perspectives. Though large businesses have financial advantages in funding innovation, small businesses have advantages in driving innovation, as entrepreneur-inventor types, and frequently have the stronger motivation to innovate in e-Business tools [4].

Conclusion

Impacted by the slowed economy, the small business market is currently focused less on innovation and more on fundamental functionality of e-Business that effects benefits to the traditional brick and mortar store. Through e-Business the small business market is still enabled to compete effectively, and small businesses, such as those of the Hudson Valley of New York State, are thus positioned to initiate optimizing customer relationship management and transforming the characteristics of their Web sites, in preparation for an economic recovery. Further research continues to be needed to study the experiences of small businesses and the future of customer relationship management and e-Business in this dynamic market, and this introductory study is initiating a new living framework.
References


Strategic Distribution within the Context of e-Commerce: 
Effect on Distributors and Re-Sellers

William T. Rupp, rupp@rmu.edu 
Alan D. Smith, smitha@rmu.edu
Robert Morris University 
Department of Management and Marketing 
Pittsburgh, PA 15219-3099

Abstract

As larger firms race to enter the world of B2B and B2C e-Commerce, they have been confronted with a wide variety of problems. Firms have had to deal with issues, such as e-mail viruses, credit card theft and fraud, and slow and confusing Web pages, coupled with dead-links, to name a few. The Internet Tax Freedom Act provides a three-year moratorium on any new Internet taxes. This Act also bars state or local governments from imposing new taxes on Internet access, as well as prohibiting any new e-Commerce taxes. However, this hands-off attitude does not seem to be shared by the local governments, which are also being hit hard by out of state mail order business and the Internet. With the amount of controversy the Internet has caused in this area already, it can be assumed that when the moratorium ends, the tax structure will change. The fact that these problems have been so widespread may have been enough to deter distributors from diving into the e-Commerce water headfirst. These distributors have a different mindset. They have labored long and hard to build and maintain customer relationships, and they will not risk losing them to a technology that is largely beyond their control. It is still their belief that consumers are customers first, and that it is the efforts of customers – not a great Web page, that is going to keep these consumers satisfied and coming back.

Key Words: e-Commerce Problems, e-Marketing Distributors and Supply Chain Management

Introduction

The Popularity of e-Commerce and the Problems It May Hold

As the Internet continues to grow exponentially in size and popularity, an increasing number of firms are beginning to enter the world of e-Commerce. Manufacturers are finding that doing business over the Internet allows them to essentially eliminate the middleman, a phenomenon commonly described in the literature by the term disintermediation, which allows manufacturers and retailers to cut costs and increase profit margins (Seminario, 1999; Seminario, 2000). However, while manufacturers may
find the increased profit margins offered by the Internet to be attractive, the distributors and re-sellers upon whom these firms have relied so heavily are now faced with several difficult questions such as if manufacturers continue to eliminate the middleman, where will this leave us? Should all distributors and re-sellers rush to the Internet right away? Will the government step in and regulate the Internet? And what advantages does the Internet hold for marketing professionals? This paper will examine these issues and explore the effect of e-Commerce on distributors and re-sellers.

The Nature of e-Commerce of in a Market Conscious Society

The Future Role the Government Will Be Playing in e-Commerce

To most consumers, e-Commerce means shopping over the Internet, that which customers do to avoid the Christmas crowds at the mall, or that busy professionals do to get themselves out of the doghouse after they forget their wedding anniversaries. However, Web shopping is only a very small aspect of the e-Commerce world. This world can range from on-line stock trading, to buying and downloading software without ever leaving the office. More importantly, e-Commerce includes business-to-business transactions that are rapidly changing the way that business is done. These transactions are changing the way that firms do their business from purchasing to marketing, to sales and distribution.

While it is understandable that a distributor may want to take the same “wait and see” attitude” with the Internet, as they have typically done with any new technologies, it does not appear that e-Commerce is going to disappear anytime soon. In fact, the future of e-Commerce is very bright. It is generally assumed that once the details of e-Commerce are finalized, it and the Internet will permanently change the method in which business is done. International Data Corporation, for instance, has projected that 46 million Americans will buy $16 billion worth of goods annually by next year, and $54 billion by the year 2002. Forrester research predicts e-Commerce sales of almost $7 billion by the year 2001 (Wilson, 2000).

As distributors are struggling to keep up with any changes in the rapidly growing e-Commerce industry, they are beginning to wonder if the government will step in and regulate this activity. In fact, one of the most frequently debated topic for discussion in regards to doing business on-line is “what role will the government play in e-Commerce?” The answer to this question appears to be diverse, with the federal and local governments having different views. It appears as if the distributors can expect limited help from the federal government, which appears to favor a “hands-off” approach. In fact, the government recently passed the Internet Tax Freedom Act. The Internet Tax Freedom Act provides a three-year moratorium on any new Internet taxes. This Act also bars state or local governments from imposing new taxes on Internet access, as well as prohibiting any new e-Commerce taxes.

However, this hands-off attitude does not appear to be shared by the local governments, who are also being hit hard by out of state mail order business and the
Internet. This was demonstrated recently, when the National Association of Counties unanimously approved a measure asking Congress to impose a sales tax on all Internet business transactions. However, at least currently, the federal government is urging the local officials to respect the moratorium. With the amount of controversy the Internet has caused in this area already, it can be assumed that when the moratorium ends, the tax structure will change. In fact, there is already an advisory committee meeting to discuss such changes and other post-moratorium policies. The Internet Tax Freedom Act formed the Advisory Committee on Electronic Commerce. Some of the policies being considered are a flat national Internet tax and methods to simplify the sales tax for Internet purchases. Even with the Federal Government’s opposition to new Internet taxes, some states have already begun taxing e-Commerce. Texas, for instance, charges Internet access charges as well as the cost of developing Web sites. Currently, nine states tax Internet services, while six states, including California, have moratoriums on Internet taxes (Hirsch, 2000). For now, e-Commerce firms are treating Web purchases much like mail-order sales. The firms collect taxes if the site has a significant presence in the state where the buyer resides. "There are lots of gray areas," acknowledges James Kwock, a Web services marketing director with AT&T Networked Commerce Service (Hirsch, 2000).

There is another issue with Net tax policies: the Internet crosses international borders as well as state lines. U. S. presidents Clinton and Bush pushed legislation to turn the Internet into a free-trade zone. While Japan agreed with this idea, other countries have already indicated a willingness to regulate the Net. For example, France has long tried to mandate the use of French on Web sites, while Germany has attempted to stamp out both pornography and neo-Nazi materials online, and Australia has regulated pornography as well. Getting international agreement on Net taxes may be the biggest hurdle to overcome.

**Emerging Markets of e-Commerce**

One other issue that distributors face when trying to deal with e-Commerce is that there are distinctly different markets in which on-line buyers and sellers operate, markets controlled by the seller, markets controlled by the buyer, and markets controlled by an intermediary. Each of these markets carries their own advantages and disadvantages. Therefore, distributors must be able to compete in each of these markets. In a marketplace controlled by the seller, a single supplier tries to attract multiple customers. In order to do this, the seller attempts to retain value and market power in each transaction. One way of doing this is to make the Web page very interactive, giving the customer the capability to handle his concerns – moving in the realm of e-learning. In the early days of e-learning, meaning much of the 1990s, the only widely available offerings focused on developing technology skills. Fortunately, the concept of training for soft skills-management, leadership, writing and strategic thinking, has emerged within the past few years, but the options are still limited. There are a number of firms that can provide soft-skills development for e learning at a set-licensing fee, including About.com, DigitalThink.com, and SkillSoft.com. However, a firm that has very specific skills requirements, such as a sales program for a new product, should be able to develop its
own content or outsource that customization job to one of the e-learning vendors. Customized e-learning content requires collaboration among a number of departments, and larger firms may have the training department that spearheads that effort and specializes in understanding what skills are needed firm wide.

For example, Burson-Marstellar has a training department that has traveled around the world, conducting seminars on skills development for e-learning purposes, but the firm's skills experts are now being deployed to develop online curriculum in each of the disciplines that the firm finds important for its employees. Another firm that has been successful with this strategy is Cisco Systems. Cisco has created a Web site, which allows customers to create their own routers, check lead times and ordering status, and obtain technical support. In addition to generating 40% of the firm's total sales, it is estimated that this on-line strategy saves Cisco over $250 million a year in printing expenses, order processing, and technical support (Koprowski, 2000).

In an e-type of market, the goal is to shift power and value to the buyer. By using the Internet to expand their vendor searches to the global market, buyers hope to increase competition, and ultimately, maximize their purchasing efforts. Some firms have been so effective with the use of the Internet in this strategy, that they have actually been able to create their own market. For instance, Japan Airlines has realized great savings by making consumable purchases on-line via procurement notices, designed to find the best suppliers. While some firms perform their own vendor searches, other buyers employ the use of intermediaries to streamline the bids that vendors submit and to find better pricing. Perhaps the most notable of these intermediaries is Free Markets Online, a small firm that runs on-line auctions for traditional industrial firms looking for semi-complex parts. These auctions typically save the customer from 10 to 25%.

In neutral marketplaces, a third party tries to match many buyers to many sellers. One such firm is Fast Parts, who operates an online business matching the seller of overstocked electronic parts to buyers. Here, both the buyer and seller benefit. The sellers get higher prices than they would from a traditional broker, and the buyers get a market-lowered price. The customer also gets an assurance of quality, as Fast Parts inspects the items before the sale.

**Distribution Chain Strategies in the Internet (The Onset of Disintermediation)**

Probably the most attractive feature of e-Commerce to manufacturers is that by selling directly to the end customer, costs are greatly reduced. This elimination of “the middleman”, or disintermediation, is threatening to put several distributors out in the cold. Therefore, in a perfect example of what economist Schumpeter (1939, 1961) referred to as *creative destruction*, new technology that is destroying old technology, distributors are being forced to change the method in which they do business more rapidly than at any time in history. While many distributors wish to develop e-Commerce strategies, they are finding it to be difficult to say the least. One difficulty is that due to the relative youth of the Internet, there are few proven models for firms to apply to doing business on-line. Most traditional B2C commerce in the business world
has at one time or another been exposed to the standard distribution chain as illustrated in Figure 1.

![Figure 1: Traditional Distribution Chain in a Typical B2C Environment](image)

In this classical model, goods are passed from manufacturers to customers, through established distribution chains that consist of middlemen, such as distributors and retailers. However, the Internet has led many firms to skip these intermediate layers, disintermediation. One of the most successful firms to do this was Dell Computer Corp. The Internet, with its near transparent automatic identification and data capture/collection systems, has been the key enabler of these worldwide product design/delivery technologies. Consequently, a growing number of firms that manufacture and/or sell consumer products are testing technologies that could transform the way industries use the Internet, in tracking goods in their supply chains. “Unexpected glitches in the supply chain often put manufacturers in a defensive mode, fighting fires and often doing more damage to their operations in the process” (“End to supply chain firefighting?” 2002, p. 46). With the development of new software and hardware tools, this reactive approach may soon be history. As supply chains become more transparent and with secret distribution systems to protect, Dell went to a direct marketing strategy, creating a distribution chain displayed in Figure 2.

![Figure 2: e-Compressed Distribution Chain in a B2C and B2B Environment](image)
Dell’s success with this approach created a great deal of debate among the rest of the personal computer firms in the world. Should they start selling direct as well? Should they risk alienating the distribution chain that they had established? Will this affect us at all? The answer to this last question was a resounding YES, as Dell is now the top manufacturer of personal computers, and the rest of the competition is still playing “catch-up.” The industry soon discovered that without two levels of price mark-ups, Dell could afford to offer personal computers to end users at lower prices, and still earn a good margin. In addition, without show rooms to stock, Dell does not build the computers until they are ordered, saving even more money. While the success of Dell may tend to suggest that the demise of the intermediary is eminent, this is not necessarily the case. In fact, many argue that the Internet has created an entirely new type of intermediary. Some of the most notable e-Commerce success stories, such as Amazon.com and Priceline.com, are actually new kinds of “middlemen.” Neither of these firms actually generates a product; rather they are merely on-line distributors.

Still, the classic success story of Dell, along many with several others, is causing manufacturers and middlemen alike to examine their distribution chains and long-standing relationships with one another. Manufacturers ponder whether they should sell on-line, and if they do, how will this affect the relationships with their distributors? Meanwhile, the distributors struggle with questions of their own. Should they start selling on-line ourselves? Should they develop relationships with new manufacturers, and/or alter our relationships with current manufacturers? And perhaps most importantly, will disintermediation leave traditional business partners out in the cold, and what must they do to survive in this new business climate?

Redefined Manufacturer’s and Distributor’s Relationships: Disintermediation a Process of the Internet Era?

An important question that manufacturers are being forced to ask themselves is whether or not to sell on-line. On one hand, the Internet offers many opportunities such as cost reduction through disintermediation, lead generation, product promotion, instant order fulfillment and order generation. Therefore, many manufacturers believe that if they do not begin to sell on-line, they may lose customers to competitors that do. On-the-other-hand, if the manufacturers do begin to sell on-line, their established distributors and dealers may desert them for manufacturers that do not directly compete with them. In fact, the effect that this will have on their relationship with their existing distribution networks is one of the main concerns for a manufacturer that is considering whether or not to sell on-line. Perhaps, manufacturers have developed a series of basic strategies for dealing with this dilemma, as suggested in the following section.

Basic e-Commerce Strategies Used By Manufacturers to Deal with the Concept of Disintermediation
No Sales on the Web Sites Points to Distributors Only

Currently, a very small percentage of purchases are generated over the Internet, generally believed to be less than one percent and not increasing in the exponential fashion that many optimistic retailers and suppliers had recently predicted. Many manufacturers feel that this volume does not currently justify alienating their distributors. These firms offer in-depth product information on their Web site without prices. Fear of the new and unknown also plays a big factor in this strategy. Many executives in established firms are not quite computer literate and still distrust a computer solution, since they have attained their success using traditional sales methods. Price gouging and the protection of exclusive sales territories are also concerns. Many of these firms have heard complaints from distributors about other distributors who are posting prices on the Web, and undercutting other distributors to sell outside of their territories. To prevent this, these manufacturers may prevent distributors from posting direct prices on the Web.

Sales on Internet Pay Commissions to Regional Sales Firms

Several firms are trying to find a way to offer customers a way to buy on-line, while not alienating distributors. One such firm is Parker-Hannifin product-line (http://www.parker.com/), which pays distributors commission for all sales, closed in their territories. This form of direct marketing is more expensive, and is more suited to higher ticket items, but so far they have been able to maintain relationships with their established distributors.

Sales on the Internet Are at List Price Only -- Retailers Are Allowed to Discount

Another strategy that is being adopted by firms with existing distribution chains, but wishing to go on-line, is to sell on the Internet, but to only sell at list price. Customers wishing for a discount are referred to a distributor. While firms may currently sell through a network of health food stores, firms typically need to increase awareness of their product. Therefore, a logical choice is to sell on-line. However, anyone purchasing in this manner must pay full list price as well as shipping. This prevents them from competing with their distributors, but it gets the product visible.

Sell Directly on the Internet at Market Price -- No Commission to Middlemen

Another strategy is to sell directly at a discounted price in direct competition with distributors. So far, this is fairly rare. Obviously, if a manufacturer were to do this, the distributors simply could not compete in the pricing, since they have to mark-up from the manufacturer’s price. However, in spite of the higher profit margins that this method offers, it appears to be attractive only to a small number of manufacturers, who have little or no established distribution chain to worry about. It is far too early to tell which of these strategies will prove to be the most successful over the long-term. Currently,
manufacturers are still trying to balance the pressures of price competition, need for product awareness and accessibility, and maintenance of the established distribution networks for the majority of their sales.

**Drop Shipping Model**

A primary advantage to drop shipping is that it entails reduced inventory costs. In addition to the cost of purchasing the product to send to your customer, inventory also requires a physical storage location, as well as the added expense of picking, pulling, and packing the inventory once the order is placed. Another advantage to drop shipping is that it is relatively transparent, by providing the shipper with labels and forms, the end customer may never know that the package was drop-shipped from another location. While these two advantages make a very strong case for drop shipping, it also carries two significant disadvantages. The first is lower margins. A distributor typically has to pay a premium to the manufacturer for drop shipping, (usually around 10%), which reduces profits. On the Internet, some categories of products are very price sensitive, and the “street” price is less than the suggested list price. In these instances, the reduced margin of drop shipping may be the difference between profit and loss.

The possible lowering of the quality of customer service is a recurring concern with distributors as it relates to e-Commerce, and it is a major concern in regards to drop shipping. By automating the entire shipping process, it is difficult at times to handle problems as they arise. Also, if distributors rely entirely on the manufacturer for order fulfillment, they sacrifice some of their ability to provide personal attention to the customer.

**The Inventory Model**

The established distribution method is to order a product from the manufacturer, and keep it on the shelf until it is ordered. This offers some strong advantages. For instance, the distributor can ship immediately; shorter lead times often win orders for distributors in the difficult B2B and C2B environments. Having a flexible and extensive inventory also provides the ability to offer enhanced customer service. In case of an issue, all the records are in-house at the distributor’s fingertips. Therefore, the problem can be traced and corrected more easily. Of course, with all order fulfillment models, inventory offers disadvantages as well as advantages. The most significant of these disadvantages is that paid for inventory can sit on the shelf and tie up inventory. When distributors own inventory, they also own the risk that the inventory entails. For instance, if distributors overstock a product, they may be forced to sell it at reduced prices just to eliminate it (Wilson, 1999c).

An efficient B2C fulfillment system is an absolute priority in a competitive environment. Problems with order fulfillment can erase any advantages that inventory may have gained for the distributor. Internet distribution requires an entirely new kind of
fulfillment system. Internet business is essentially mail order, with shipments sent in parcel size packages, which are then sent to customers. Since very few brick-and-mortar firms have an established mail order business to start from, they are initiating a new fulfillment system (Wilson, 1999b).

The Fulfillment House

Another common model for Internet distribution is the fulfillment house, an offspring of the direct marketing industry. In this model, a fulfillment house will handle some or all of the aspects of shipping the product to the final customer. The fulfillment house will maintain inventory, as well as pick, package, and ship products with the appropriate labels. They will also handle order taking and provide a customer service center if needed. Essentially, these fulfillment houses allow firms to run “virtual businesses” by outsourcing all of their operations. However, this offers the same disadvantage as drop shipping, in that the premium charged by fulfillment houses can further erode the margins that a distributor can earn (Wilson, 1999a).

The Current Small Business Attitude towards the Internet and e-Commerce

As there are few models to predict consumer behavior as it relates to on-line buying, there are perhaps fewer models to predict the behavior of distributors as it relates to on-line selling (Gantz, Farias, Glashen, and Riddle, 1998). In fact, many small businesses appear to have somewhat of a split personality in regards to this area. According to an article in recent edition of the e-Commerce Times (Regan, 2000) nearly 75% of U.S. small businesses have gone through the effort and expense to establish a Web page, yet they appear largely non-committal in their e-Commerce efforts. A recent survey from National Small Business United and a consulting firm, Arthur Andersen, found that 71% of small firms have or are planning Web sites (Regan, 2000). However, this survey also revealed that 42% of these firms expect e-Commerce to have no impact on their businesses. More than one-half currently have no e-Commerce activities and do not plan to add within the next year. As with business-related behavior, there are several factors, which could explain the less than aggressive efforts of distributors to begin doing business on-line.

Provincial Attitudes and Exclusive Sales Territories

Many distributors still possess a provincial attitude towards their business. Many distributors operate very locally, with exclusive sales territories. Therefore, many of them question the need to move to the World Wide Web, when their entire customer base is within earshot of the local radio station or newspaper.
No Stockholder Pressure Affords a Wait and See Approach

While large firms may fight for market share and brand name recognition, in order to achieve global domination, many local distributors were built one customer at a time, through a grass-roots approach to building a customer base. These distributors are also privately held firms that do not have to respond to shareholder pressures. By being able to keep their financial cards closer to the vests, distributors are able to take more of a wait-and-see approach to e-Commerce, while such a laid back approach may result in an outcry among the shareholders of a public firm.

Not Willing to Risk Customer Dissatisfaction

As larger firms race to enter the world of e-Commerce, they have been confronted with a variety of issues. Firms have had to deal with issues such as e-mail viruses, credit card theft and fraud, and slow and confusing Web pages, coupled with dead-links, to name a few. The fact that these issues have been so widespread may have been enough to deter distributors from diving into the e-Commerce water headfirst. These distributors have a different mindset. They have customer relationships, and they will not risk losing them to a technology that is largely beyond their control. It is still their belief that consumers are customers first and that it is the efforts of customers, not an excellent Web page that is going to keep these consumers satisfied and returning to the Web site. Successful e-Commerce and disintermediation strategies challenge the widely accepted and practiced theory of linear thinking (dominant school of management) in a nonlinear environment (chaos).

Stacey (1996a, 1996b), for illustrative purposes, discusses the ecological school of management that holds human organizations survive by chance, and only if they happen to have the right competencies required in the market place at a particular time. This concept contrasts with dominant school of management thinking that advocates managers to envision the future and develop a successful organizational strategy, in advance of, or in response to, the environmental change. Stacey (1996b) argues, “When we come together as a group, we constitute a complex adaptive system in both a biological and a mental sense”. He then rationalizes “It follows that all organizations are such systems”. The result is complex adaptive systems that “consist of a number of components, or agents, interacting with each other according to sets of rules that require them to examine and respond to each other’s behavior, so as to improve their behavior and thus the behavior of the system which they comprise”. The application of a complex adaptive systems or chaotic systems of Stacey (1996a), Stacey (1996b), Wah (1998a), and Wah (1998b) basically assume inherent order will unfold out of complex adaptive systems, through the collective experience of the system. However, no one knows what this order will be until it occurs. In other words, the future unfolds through the evolution of the complex adaptive system, known as the organization that exists at the edge of system disintegration. Stacey (1996b) further conveys “that neither the messy creative
processes at the edge of system disintegration, nor their outcomes, can be planned or intended because long-term outcomes are truly unknowable at the edge of chaos”. Thus, the authors of chaotic systems do not give much credibility to strategic management principles.

Many authors that view firms undergoing disintermediation cavalierly advocate a management theory that relies on complete random chance for survival. Complexity theory subordinates the responsibility of managers to lead their organization to survival and profitability to pure circumstance and the hope that the organization will figure out its direction. The saying, “if you do not know where you are going, you will soon be there” describes this theory of management. Finally, advocates of this complexity theory believe firms eventually die, because managers have no control over the fate of their organizations. To the contrary, good managers are instrumental to the survival of their organizations, and organizations die as a result of bad management. The challenge to management in this era of the Internet is to survive and prosper with the rise and fall in popularity of various management tools, representing a continuous learning curve for businesses in search of the best formula for survival and growth.

Implications Associated with Marketing in an e-Commerce Environment of Disintermediation

The business of e-Commerce appears to be a main stay, as evident with the decline of shopping through traditional venues and the sharp increase in online shopping in the pre-Christmas and Christmas sales in late 2001. Distributors seem to have accepted this fact. However, while most distributors realize that operating on-line will soon be a necessity for them, they must overcome several barriers of entry before joining the growing list of e-Commerce firms. The first barrier that businesses must overcome is the general distrust that consumers have of doing business on-line. According to a survey conducted by Commerce Net, many shoppers generally do not trust e-Commerce and prefer a brick and click proposition (“Shoppers browse on Web, buy off racks,” 2000). For e-Commerce to continue to grow, firms must address these concerns, including not being able to find what they are looking for and the lack of an easy way to pay for things. These customers are also apprehensive about the risk of credit card theft, the privacy of personal information, and poor network performance. For many, the advantages of shopping on-line are outweighed by the hassle of finding firm Web pages, waiting for images to load, trying to figure the order process, and risking credit card theft. However, Gail Grant, the head of the research department of Commerce Net, believes that most buyers will eventually be won over. Yet, another concern is that businesses still do not have good models for setting up their e-Commerce sites, and they have trouble coordinating the orders and information collected online with the rest of their operations. Grant states that if Web pages were labeled with tags giving prices and product information, it would be easier for search engines to find the pages.
Implications and Conclusions

Many firms are still wrestling with the idea of sharing proprietary information with customers and suppliers – an important part of any business-to-business e-Commerce system. Disintermediation and its related management control and tools, such as Enterprise Resource Planning (ERP), may hurt firms when implemented improperly or implemented in inappropriate business situations. Moreover, managers should not follow management tool fads based on their popularity, but on their ability to improve specific business situations. This paper suggested a number of manufacturer strategies for dealing with this dilemma.

References


Seminario, Maria, (2000), “Click and mortar brigade born - dotcoms learning that they need physical channels in order to survive,” E-Week, (June 12).


Strategic XML and Enterprise Management Considerations

Alan D. Smith, smitha@rmu.edu
William T. Rupp, rupp@rmu.edu
Robert Morris University
Department of Management and Marketing
Pittsburgh, PA 15219-3099

Abstract

The globalization issue that enterprises face is a major hurdle to overcome in firms, especially when implementation of XML (Extensible Markup Language) is the consideration involved to communicate across divisional boundaries within the firm. Included are discussions relating to government regulations, along with marketing issues that are faced by the enterprise. A discussion is included concerning the differences of languages that originated the need for XML and its associated database naming conventions and tags. This study integrates research from a diversity of industry leaders in firms and includes the Technology Acceptance Model, which is applied in the discussion of XML implementation into an emergent and untapped market.

Key Words: Extensible Markup Language (XML), Internet Applications and Technology Acceptance Model

Introduction to the Technological Challenges

XML and Related Technologies: On the Forefront of Changing Standards

Looking at the market trends of the past several decades, one discerns an emergence of a global economy that has grown exponentially. The 21st century has seen the emergence of the new economy of global connectivity as the preferred method of how business is to be conducted. For example, contemporary business enterprises see the need for a firm in China to communicate with a firm in Germany. This new technologically enabled global economy brings forth compatibility issues. Within these issues business managers still see a need for a cost-effective solution. XML-related technologies are adding customer and supplier value into this complex chain of Web-enabled users. However, XML is still emerging and not a staple in the industry. This situation will continue to occur over the next several years, until firms see the need to communicate globally with different software and associated programming languages driving their databases and applications. XML may well be slated as the cost-effective solution of communication between databases and applications.

XML was originally intended to make it easy and straightforward to use SGML (Standard Generalized Markup Language) on the Web, that is, easy to define document types to author and manage SGML defined documents, and to transmit and share them across the Web. SGML is essentially the international standard for defining descriptions of the structure of different types of electronic documents. SGML is very large,
powerful, and complex in its information architecture, and has been in significant applications through both industrial and commercial use for over a decade. There is a significant body of expertise and software to go with it. XML is a lightweight cut-down version of SGML, which keeps enough of its functionality to make it useful, but removes all the optional features, which make SGML too complex to program for a typical Web-enabled environment.

In addition, comparing minor as well as major differences among cultures and languages, it is relatively easy to envision that the communication of a simple data message in a document can be different from country to country. For example, in a client/sever environment based in Japan that is providing a calendar to a client located in the Netherlands, one can see that the data encoded in the Japanese language would place a barrier to the client in the Netherlands using the Dutch language. If the Dutch language is selected on the browser, the client will see the Dutch version and not the Japanese language version. Behind the scenes, the change would occur without the client knowing if XML was implemented. In addition, if one inspects the current business-to-business (B2B) model and its transactions, there are several complementary and conflicting technologies, along with many native different languages and formats of databases. The non-technical client might comment, have it function; however, those in the technology field realize the large and challenging task that this type of implementation involves, both in routine implementation as well as in automated conversion activities. Of course, other technical and managerial aspects that need to be analyzed for mergers of technologies include the solving the magnitude of differences in databases, networks, middleware applications, operating systems, and server configurations.

Although software and hardware technologies are making significant steps forward in innovation, the current downside is the inability of these technologies to operate together if they are not from the same vendor, in fact, sometimes even the same vendor can have vast differences from version to version. For example, in an application that deals with a flaw in a database design and not in software or version compatibility, inspecting data tables and their naming conventions are particularly difficult since one firm might name the customer name field as “custfname” and another might name it “firstnmecust.” With XML, there is no need to change the entire database structure, but to implement the appropriate tags for recognition. However, communicating cross-nationally as well as cross-culturally has generated many problems in developing Enterprise Resource Planning (ERP) systems. As noted by Waurzyniak (2000), as manufacturing operations demand faster, more efficient delivery and IT systems, suppliers of ERP software are under increasing pressure to incorporate Web-based technologies into newer systems. These newer systems must be capable of leveraging the speed and vast reach of the Internet. Automatic identification and data capture systems are greatly needed to work in concert with the Internet, along with intranets and extranets of firms, to join the current e-Commerce business opportunities with the major suppliers of ERP, which includes the leveraging power of Manufacturing Resource Planning (MRP) systems. MRP and related software packages are, in turn, using Internet technologies, such as XML, in their rewritten packages. These trends are resulting in the establishment of strategic business alliances, involving trading exchanges and Web
portals. Thus, "enterprise software suppliers nearly missed the e-Commerce boat, as many ERP vendors last year were busy with Y2K-related preparations to recognize an ERP industry slowdown" (Waurzyniak, 2000, p. 43).

From the customer perspective, one realizes the need to have these technologies function together in a seamless manner to insure the customer has an expected up time. If they do not function together efficiently, the acquisitions and mergers no longer are cost effective, and the technology that was sought has now failed the enterprise. Until now, Electronic Data Interchange (EDI) has provided a solution, but only to large enterprises that could afford the implementation costs associated with it. Who owns XML? XML is a project of the World Wide Web Consortium (W3C), and the development of the specification is being supervised by their XML Working Group. A Special Interest Group of co-opted contributors and experts from various fields contributed comments and reviews by email. XML is a public format; it is not a proprietary development of a firm (Cowan, 2001). The v1.0 specification was accepted by the W3C as recommendation on Feb 10, 1998, and v1.1 specification was accepted as recommendation on December 13, 2001.

Convergence of the World to a Unified Code

Why is XML such an important development? Application of XML-related technologies removes at least two major constraints, which were holding back Web-enabled developments, which include the following: dependence on a single, inflexible document type (HTML), and the complexity of full SGML, whose syntax allows numerous powerful but hard-to-program options. XML simplifies the levels of optionally in SGML, and allows the development of client defined document types on the Web. EDI is a widely used technology today. The current barrier to use EDI is the start up cost. Most small enterprises do not have the finances to support an implementation of this cost. Thus, only the larger enterprises can reap the benefit of EDI.

Global Telecommunications Market

The global telecommunications market is relatively new. Initially, the United States government strongly monitored AT&T’s steps into the international market. Once the government relaxed many of its restrictions, other countries slowly followed. Until that point, the United States was developing the most advanced telephone network. In Europe the countries basically purchased from only two suppliers called “country champions”. This had led to different development than in the United States. As suggested by Bradley, Hausman and Nolan (1993), “removal of trade barriers in telecommunications services should lead to increases in economic efficiency and economic welfare, as have other reductions in trade barriers over the past 30 years throughout the world.”

The changes in government regulations, which freed the communications giants from many of the restricted trade barriers in the telecommunications industry, brought about increased competition, and therefore generally resulted in less expensive and better
quality of services to the customers. The examination of International Telephone and Telegraph (ITT) Company, along with American Telephone and Telegraph (AT&T), can add insight on the ramifications of how removal of governmental barriers enabled the communications giants to move into the global marketplace. The resulting infusion of new technology, better customer service, lower prices, and greater range of services to an increasing audience were bought about through increased competition in the telecommunications industry.

If we apply Bradley, Hausman and Nolan’s (1993) statement to XML, one can easily replace the government restrictions with the technology restrictions and see the outcome may be the same. Major firms will have the ability to deliver higher quality services at a lower cost, because the cost of doing business will decrease. Some of the applications-specific barriers for technology include the differences in software and hardware vendors and their associated design problems. For example, software developed in C++ running on a server using the Linux operating system and an Oracle database will probably not communicate correctly with software developed in Visual Basic running on a server using the Windows NT operating system and an Access database. By removing the technological barriers with XML design and assignment tags one can create the bridge between the two different environments. If XML is not used, the choices are limited. EDI could be used, or even more costly would be a complete redesign of one or both of the systems that need to be merged.

Discussion of Modeling Technology and XML

Technology Acceptance Model (TAM)

TAM theorizes that perceived usefulness and perceived ease of use determine actual intentions and behavior (Davis, 1989). XML is widely acknowledged, but still a fairly unknown technology commodity. If one applies TAM to XML, one can see that perceived usefulness and perceived ease of use are directly affected by external variables. In turn, this condition affects the attitude toward use.

Figure 1. The basic premises of the Technology Acceptance Model (TAM) are illustrated in a graphic form (modified from Davis, 1989).

The “attitude toward use” attribute can be influenced by who is releasing the version, along with testimonials of firms that have had either success or failure so far.
When looking at perceived ease of use, one certainly should be able to include marketing to XML-related technologies. The WC3 released v1.1 of XML on December 13, 2001 (Cowan, 2001). At the time of this study, no firm has decided to market XML. Microsoft and IBM are the industry leaders so far and they have not made significant steps to market the program. As they do stabilize the program, their marketing will increase and the perceived ease of the parameters will increase, based on how they decide to properly market XML. If one looks at perceived usefulness, one can already understand that XML has, by word-of-mouth, been slated as the savoir, giving the perceived usefulness a definite advantage.

**International Business Ventures and Mergers**

To introduce the potentialities of successful development of internal business ventures and mergers in this area of technology applications, one ought to briefly examine international business ventures in general, and review the difficulties of aligning the management and cost involved with bridging the technologies of the firms together. During these ventures, one firm can assign the cost responsibility on the other and vice versa. This situation can then lead to difficult relationships on who should change their product/technology for the alliance or link up to the customer of the provider of the technology. Consequently, complexities in international joint ventures may run deep. According to Aimin Yan and Yadong Luo (2001) “…international joint ventures represent an intercultural and inter-organizational linkage between two separate parent firms that join forces with different strategic interests and objectives. These parents, unlike the shareholders of a widely held public firm, are visible and powerful and can and will disagree frequently.” In the technology industry, one sees more firms forming strategic alliances for research and also for penetrating a market. One firm might provide the network infrastructure, while the other provides the software. Normally these firms would have never sought out alliances; however, to assist corporations in cost-reductions, alliances are becoming more common. This is where one can see the issues arising from different technologies.

Looking at the standard trade process between countries, one can see obstacles of distance, transportation cost and governmental barriers on tariffs. This makes the process long and slow. However, in the technology area, one can see an instantaneous link occurring. Data being transferred does not have the time limitations that standard cargo has. However, data management does bring in its own unique problems. XML should be able to resolve these data barriers, and ultimately assist in the globalization of data.

The customer is not "one of many", but an important part of the business. It is through the value-added services that prompts the customer is to return. XML-related technologies should go a step further and make the customer visit a value-added service to the manufacturers and service providers as well. Customers are given input into everything from how the site looks to what products/services are offered. By making the customer feel a part of the business, proper data management techniques should allow for the development of a sense of ownership on the part of the customer, thereby creating a stronger relationship. Unlike existing Web shopping experiences, focusing on making all
information a client might request readily available through one or two clicks of a button would add considerable value. The client does not need to search for such an item.

The site queries the visitor and asks how it may be of service. The customer does not search for information on an item or shipping charges, which is very similar to FedEx’s operational procedures. The information is provided at the touch of a button. Although the facility of frequently asked questions is available, but so is a real consumer, once again at the click of a button. Finally, a customer does not have to worry about follow up. The Web site should provide price totals and ship dates for item, including a tracking number for the customer to use to track their order, and follow up with e-mails confirming when the order shipped, how it was shipped, when it should arrive, and, most importantly, the name of a telephone number of a real consumer who can help if there are questions or concerns which cannot be addressed via instant messaging or online dialog. Online shoppers are demanding more customization, more interactions, and a higher level of relationship with their online providers. If online commerce is to continue to grow, manufacturers and service providers must be willing to meld the personal interaction components within this high technology of the Internet, automatic identification and data capture environment to provide potential and existing customers with a truly unique experience.

The development of innovation through the development and marketing of products and services has been a key source of competitive advantage for many large and small manufacturing firms. The amount and content of information on Web sites substantially depends on the information intensity of the product/service of the firm. For instance, low information-intensive products and services, such as cigarettes, food, and utilities, can be sold on-line without providing much information for customers, since customers are highly aware of these products. Thus, the Internet and automatic identification and data capture systems content do not require extensive information, equipment or hyperlinks to related information on these products. On the other hand, customers like to have as much information as they can for high information-intensive products and services, such as cars and insurance policies. Hence, Web sites and automatic data capture systems of firms providing such products/services should include internal links and hyperlinks to all kinds of related information.

**Future of XML**

The XML related technologies can be examined from a marketing perspective for the future of the XML market. Once a firm has selected a market or country to enter, and the designated product lines that will serve as the launch vehicle, it must determine the mode of entry (Govindarajan and Gupta 2001). For XML the delivery method will come from both the WC3 approval and also big players like Microsoft and IBM. They will develop the structure and release it to the public, as the market demand and profitability become more stable, along with the stability of the program structure.

In December 2001 W3C released its recommendation for version XML 1.1, W3C Working Draft. (Cowan, 2001). This recommendation was released three years after
version 1.0. This version strongly indicates that XML is in the development stage, not at market saturation or even penetration, leaving many opportunities for change to occur. Hence, according to Connolly (2001), XML should allow the following events to occur:

- Enable internationalized media-independent electronic publishing;
- Allow industries to define platform-independent protocols for the exchange of data, especially the data of electronic commerce;
- Deliver information to user agents in a form that allows automatic processing after receipt;
- Make it easy to develop software to handle specialized information distributed over the Web;
- Make it easy for consumers to process data using inexpensive software;
- Allow consumers to display information in the manner they want it, under style sheet control; and
- Make it easy to provide metadata, data about information, to help clients find information, and to help information producers and consumers find each other.

XML has many promises to fulfill; the market needs and demands it. If one follows the leaders in the industry, which currently are IBM and Microsoft, one will soon see XML implementation cost drop, and more consumers using it.

Implications and Conclusions

The enterprise needs to make a long-term investment in XML. The technology that is being used currently must also include XML strategies. This will make the transition easy in the future. As suggested by Taylor (2002), concerning related technologies, such as SGML:

SGML is a powerful enabling technology; but with the power comes complexity. The base concepts take time to ‘sink in.’, and the new product and process possibilities that SGML enables will take even longer to bubble up into individual and corporate consciousness. Expect resistance. Some of it will be pure resistance to change, but much of it will be due to a lack of understanding. Counter the resistance with education … a little bit at a time, over and over again.

By implementing the XML tags now, time and expense will be saved in the future, as suggested in this study. If the relevant XML tags are in place, this transition will be less complicated. Some existing authoring tools are compatible with XML, and they will continue to be merged into the market, as firms release most cost-efficient versions.
References


"It's a small world after all" (2001) XML Magazine, p. 34-37, (December).


Workplace e-Mail Internet Privacy Policies:  
a Multi-Firm Analysis

Alan D. Smith, smith@rmu.edu  
William T. Rupp, rupp@rmu.edu  
Robert Morris University  
Department of Management and Marketing  
Pittsburgh, PA 15219-3099

Abstract

The future of e-mail has exploded from basic electronic letter writing to a full-blown marketing channel. E-mail continues to grow daily and is expected to reach 35 billion messages by 2005. Security and privacy are almost synonymous when discussing the Internet. Security is initiating methods to preclude intruders from invading a client computer or protecting it from attacks. Privacy is a subset of security; in the protecting of client personal data, like e-mail lists, user ID passwords and social security numbers, from hackers. The lack of a formal e-mail policy in many firms is most likely due to the recent introduction of networked personal computers and the general corporate culture at the specialty steel manufacturer firms of this study. In looking at firms in Pittsburgh, Pennsylvania, a number of which are in highly regulated businesses, it is interesting that the telecommunications industry does not have an e-mail policy. E-mail and technology intensive communications needs to be used for self-monitoring and reputation tracking, rather than exclusively for explicit performance, alleviating pressures to meet metrics and thus corrupt information about actual performance.

Key Words: e-Commerce, e-Mail Policies, Internet Security and Privacy Issues

Introduction to the Nature of the Problem

E-mail as a Pervasive Business Communication Tool

E-mail has become one of the most pervasive business communication tools and is a rich source of business intelligence and a channel of unparalleled power. Firms rely on e-mail to communicate all essential data from financial results to daily departmental communications. The future of e-mail has exploded from basic electronic letter writing to a full-blown marketing channel. As evident, modern communication channels are bombarded by huge quantities of unwanted e-mail from numerous sources, which offer everything from mortgage quotes to the hated love computer virus. Most are static e-mails, but one is seeing more and more dynamic e-mails containing graphics, color, moving pictures, and even the ability to browse within the e-mail. E-mail is rapidly
evolving into the next generation of the TV commercial, complete with interactive capabilities and intrusive ads that dominate the screen and that needs to be forcibly removed from sight. However, along with this increasing complexity, e-mail and their related e-mail tools have developed that allow the sender much greater control over who receives these e-mails. Legitimate firms, such as Pizza Hut, Staples and Amazon.com, as well as others, have developed highly sophisticated e-mail programs that allow them to communicate very effectively with their customers.

E-mails are tailored to consumer preferences and shopping patterns. The goal in doing this is to create a perception in the customer that this is a value-added service (i.e. Amazon e-mails offering book purchasing advice based on recent purchases), which then results in additional sales to the firm. The key to these programs is the ability for consumers to subscribe and unsubscribe themselves at will. Legitimate firms and individuals will always provide a method for removing your e-mail address from their database. At the bottom of this newsletter, for instance, are instructions for subscribing or unsubscribe from the newsletter. Every month these are used to add and delete e-mail addresses from the system.

The issue is that since these programs are becoming cheaper, and more readily available, to novice and/or non-legitimate consumers, spamming will increase. Also, many have multiple e-mail addresses now and have these forwarded to a single address. Often consumers forget about these Web or secondary accounts and get frustrated when they continue to get e-mail after requesting to have their primary account removed. Finally, new programs that “mine” e-mail addresses from the Web allow consumers to create large databases of e-mail addresses that can be purchased by spammers.

First, one has to ensure that one knows his or her e-mail addresses. If one uses a portal, such as Yahoo, MSN, or Excite for a start page on the Web, one has to check if an e-mail address is established. If so, one has to decide if the address is needed and if it is to be automatically forwarded to a primary address. One suggestion is to retain the address for use in a Web transaction, but not to forward it to the primary address. Other suggestions include a reminder to check this address weekly and delete unwanted e-mails.

Second, when an unwanted e-mail is received at an address, one needs to see if there is an unsubscribe button or process. If so, one needs to check the e-mail header to see if it was sent to a specific e-mail or to a distribution list. If it was sent to a specific e-mail, one needs to use the unsubscribe process to unsubscribe that e-mail address. If it was sent to a list, one starts by un-subscribing a single secondary e-mail account, to see if that results in an increase or decrease of spam. With unscrupulous e-mailers, the unsubscribe command is a method to ensure legitimate e-mail addresses, which they then can bombard with spam. Using the secondary account protects the primary account from falling into the wrong hands. One can cancel the secondary account and establish a new account. If the secondary account does not receive an increase of spam, and one continues to receive spam in the primary account from the same source, one ought to unsubscribe the primary account.
Third, one utilizes the rules command in the e-mail software or third-party spam-blocking software, in order to automatically delete mail from certain addresses or domains. Outlook, Outlook Express, and Eudora offer rule creation tools to direct incoming e-mail. Most e-mail software has rule or filtering systems as well. One can use these tools to not only auto delete spam, but to redirect incoming e-mail into specific folders. This can often save significant time in reading and responding to e-mail. Many Internet Service Providers (ISPs) offer spam-blocking software with a large variation in success. One ought to use this software carefully, as poorly designed spam blockers can result in legitimate e-mails being blocked as well. One ought to use the home page of the ISP (keyword Spam in AOL) to see the offered provider services. As more and more consumers connect to the Web, e-mail will continue to evolve from an electronic letter-writing tool to a sophisticated marketing and communication channel. To avoid drowning in a sea of spam, one ought to follow guidelines to ensure that the e-mail that one wants is the e-mail one receives from the Web.

**Complexity of Corporate e-Mail Issues**

Unfortunately, the increased use of this indispensable tool is creating problems for firms. Serious consequences can result if a corporate e-mail system is accidentally or intentionally misused or inadequately managed and protected. Some of the unwanted effects of an unmanaged corporate e-mail system include legal liability, lost productivity, loss of confidential information and network degradation.

In addition, it is now necessary for firms to comply with government legislation and regulatory guidelines for firms to effectively control, manage and secure e-mail systems and e-mail communications. Through the creation, implementation and control of a corporate e-mail policy, a firm can secure and protect the e-mail resources. It is important at the corporate level to help identify the benefits of e-mail and avoid the drawbacks. This standard will be introduced in the e-mail policies of the firms in this study and will include suggestions to control and secure e-mail systems that fit business needs. In the following of the study are five firms located in Pittsburgh, Pennsylvania and their respective e-mail policies. These policies, while diverse, as the industries for which they were developed, exhibit common characteristics.

**E-mail Policies of Firms**

**Case Study One: Corporate Profile for a Financial Services Firm**

Founded over a century ago, this financial services firm has long been known as a cornerstone of the Pittsburgh community. Having recently shed its regional consumer banking business, it is now focusing on the areas of asset management, both on a business and institutional basis as well as individual wealth management. The
organization’s strategy is to provide a wide array of financial solutions, and has $2.7 trillion under management, administration, or custody, including $590 billion under management. The firm is re-focusing itself to also include human resource services among its other offerings, having recently acquired some of the leading consulting firms in this market. There are currently over 15,000 employees globally including a large presence in the United Kingdom with nearly all of these consumers being linked through the firm intranet and e-mail systems.

The firm is a disciplined and hierarchical environment, with mature policies to govern all areas of employee responsibility. These structures arise out of the need to comply with a multitude of governmental regulations imposed on the financial services industry and also due to the involvement of this firm with supplying services to Federal agencies.

**Case Study One: Financial Services e-Mail Policy**

The employees of this firm are required to consider all messages and information contained in the e-mail system to be subject to access, monitoring, review and/or disclosure by authorized personnel at any time, with or without notice. Any employee who uses the e-mail network has no reasonable expectation of privacy regarding these communications, even if a private password is applied, or if the communication has been marked as confidential.

Employees may not use harassing or offensive messages nor may they solicit through firm e-mail, including chain letters. All e-mail attachments, both incoming and outgoing, must be less than 9 megabytes (cumulative) per e-mail and may not contain any executable files. Employees are forbidden from deliberately introducing any program or virus to their computer and cannot automatically forward e-mail to any personal e-mail service.

The general rule is that all firm assets, both physical and virtual, are to be used only for business purposes. Violations may be cause for immediate disciplinary action, and any violations, identified through statistical monitoring of e-mail messages, will be reported to the human resources department.

**Case Study Two: Corporate Profile for a Utility Firm**

As a leader in the transmission and distribution of electric energy, this firm offers technological innovation and superior customer service to more than half a million direct customers throughout southwestern Pennsylvania. It is the intention to optimize corporate performance and shareholder value through subsidiaries that leverage corporate resources, that include an extensive knowledge of the distribution business, an established and growing customer base, and a culture that promotes flexibility and entrepreneurial spirit.
Case Study Two: e-Mail Policy of Utility Firm

The firm will, where required by law, accord the appropriate and relevant level of workplace privacy by complying with all applicable governmental regulations relating to such privacy issues, including the maintenance of records, provision of personal information and the monitoring and regulation of electronic communication. The computer network and e-mail software are firm property and are intended to be used for business-related communications. The firm reserves the right, consistent with applicable laws, to access and disclose all messages sent over the e-mail system. Employees do not have a personal right in any matter created, received or sent from or to the e-mail system of the firm.

All messages sent by e-mail should be content appropriate for a professional business setting. Messages which may reasonably be understood to constitute intimidating, hostile, or offensive material on the basis of sex, race, color, age, religion, national origin, sexual orientation or disability are expressly forbidden. The workplace harassment policy of the firm against sexual and other harassment applies fully to the e-mail system, and any violation of that policy is grounds for discipline, up to and including discharge at the option of the firm.

Case Study Three: Corporate Profile for a Specialty Steel Firm

This firm, a major player in domestic US specialty steel production, has been in existence in its present form for approximately 16 years and enjoyed very profitable market conditions for the first 11 years of its existence. Recent trends in the specialty steel market include increased global competition and depressed pricing. These pressures are leaving their mark on the corporate culture, for better and for worse; however, at this time, firm employees, in general, still enjoy great freedom on the job, both in how they carry out their duties and in how they conduct themselves. Corporate “policy” is not overly stressed, and a survey of most firm employees would uncover a lack of knowledge regarding many of the existing corporate policies. A good sense of humor is appreciated by most of management, and camaraderie amongst co-workers is good. At times the latitude management has granted has been abused, but, in general, this freedom is cherished, appreciated and respected.

Case Study Three: e-Mail Policy of Specialty Steel Firm

E-mail and Internet access is a relatively new phenomenon at this firm. Wide dispersion of networked personnel computers only dates to over three years. Prior to this, there was an internal networked communications system tied to the production computer system, but it was rarely applied, and almost all communications were performed through memorandums, meetings and telephone. While the system was characterized as outdated
and inefficient, in retrospect, the lack of e-mail promoted a more personal approach to business dealings that provided significant benefits for the participants and the firm.

The lack of a formal e-mail policy is most likely due to the relatively recent introduction of networked personal computers and the general corporate culture at this specialty steel manufacturer. As most management employees moved up the ranks from operations, the mill culture has had a great influence on the corporate culture. Employment in the mill is not for the timid or those who are overly sensitive. The language and humor would be classified as outrageously inappropriate by just about any measure of political correctness. When e-mail and the Internet were introduced, transference of this culture to this new medium, in the absence of a formal policy, was natural. While there are firewalls on the Internet server to prevent access to sites considered inappropriate, there are no similar filters on the e-mail server. While this allows for a free flow of information, it opens up the firm for possible litigation.

Daily through e-mail, jokes, pictures and comics are interchanged amongst the employees and many would be considered inappropriate in a business setting. However, since the corporate culture is one of casualness in personal communications, this use of e-mail has not been officially banned. The level of knowledge by upper management regarding the content of e-mail within the firm is uncertain, though it is generally believed that management simply turns its head.

Discretion in distribution is exercised by most and to date there have not been any known negative repercussions; however, it is a matter of time before a complaint is filed. While many lament the action, the IS department has initiated a study into instituting a corporate e-mail policy. With recent changes in upper management, many of whom were not raised in the firm’s culture, a shift in culture is inevitable. As e-mail has become the predominant mode of communication in the firm, employees need to know what protections they are afforded and where they are vulnerable.
Case Study Four: Corporate Profile for a Telecommunications Infrastructure Firm

As the global leader in the telecommunications infrastructure industry, this firm provides tower, rooftop, and antenna services to wireless telephone and network providers across the United States, Puerto Rico, and the United Kingdom. The firm currently owns and operates more than 11,000 assets worldwide. In addition, tower space is leased to the wireless carriers for them to place their antennas to leverage their coverage area. In an effort to market and sell infrastructure services, the firm offers a Web site that allows customers to locate potential tower and rooftops to lease antenna service space. The firm is driven by and dependent upon revolutionary technology. The customers of the firm expect it to operate with the most sophisticated technological tools available. It is essential that employees have availability to the high-speed networks in order to communicate effectively, such as e-mail.

Case Study Four: e-Mail Policy of Telecommunications Firm

Currently, the firm does not monitor employee e-mails, although the tools are in place to do so. Each employee in the firm, including consultants and temporary staff, are given a firm e-mail account. There are no restrictions on the domains that e-mail may be sent to. Furthermore, due to the high-speed network connections and high availability architecture, rather large files may be sent as well as received via the account. In the future, the firm may choose to monitor for content that is addressed in the e-mail policy, such as racial content and sexual harassment, but that practice is not in place, and would only occur if there were a suspected reason to do so. Recently, management has proposed a global e-mail policy to the Chief Executive Officer.

There are both benefits and detriments to this policy, or lack there of. The benefits rest mostly with the employees of the firm. According to several studies performed on strategic management in relation to the management of employees, employees value trust and honesty from their managers. The fact that the firm has the technology, and even the system in place to monitor e-mail content of employees and still refrains from doing so, displays trust.

There are several detriments that could impede a firm that does not have a concrete e-mail policy in place. Sending unsecured e-mails through the network could threaten the security and possibly contaminate a priceless source of information and communication that the firm depends on to function successfully. In addition, it is possible, and very likely, that on some occasions employees are going to abuse the tools available to them for non-firm application and less productive intent.

Case Study Five: Corporate Profile for a Health Care Firm
Employing nearly 4,000 consumers, this health care firm is still relatively new having been formed approximately six years ago. The focus of this firm is excellence in community healthcare in southwestern Pennsylvania, parts of eastern Ohio, and the northern panhandle of West Virginia. Part of the commitment to excellence involves maintaining a policy to control Internet and all other electronic communication. This policy is necessary in part to comply with Joint Commission for the Accreditation of Health Care Organizations (JCAHO) and Health Insurance Portability & Accountability Act (HIPAA) regulations, regarding the control and protection of confidential information pertaining to patient information of any kind.

Case Study Five: e-Mail Policy of Health Care Firm

The health care industry has to be careful with all electronic communication; precautions must be taken to ensure that electronic communication is not being used to compromise any confidential or protected information. To this end, a policy outlining the acceptable application of the electronic communication network of this health care firm is a necessary tool designed to restrict the unauthorized exchange of confidential or protected information via electronic means.

The health care firm being critiqued, although relatively new, is comprised of two well-established hospitals in southwestern Pennsylvania. Upon formation of an integrated health care delivery system, the two hospitals combined individual policies into one uniform, system wide policy regarding electronic communication, including e-mail.

The policy of this firm is designed to cover the following forms of electronic communication including, but not limited to e-mail, electronic file transfer, fax machine, telephone, voice mail, electronic bulletin board, wire service, and on-line service. The policy states that electronic communication should be used for activities that support the functions of the institution. It also requests that personal use be limited and warns that use will be restricted if it interferes with business being conducted. Unacceptable uses of electronic communication include viewing or accessing profane or vulgar sites, transmitting threatening material, disruption of the network, distribution of viruses, worms, and chain letters, and forwarding of non-business related messages to large groups. Employees are also specifically prohibited from encrypting e-mail messages that are sent, stored, or received on the system. Protection of passwords is also strongly encouraged to limit access to the system by unauthorized individuals. Unauthorized expenses incurred by employees are addressed and will not be reimbursed by the firm. Employees are reminded to respect all copyrights held by other firms and individuals.

The policy clearly notes that the firm may monitor employee communication and track individual usage patterns for reasons including, but not limited to, detecting patterns suggestive of illegal activities or violation of firm policies by employees or affiliates. Failure to comply with the policy may result in disciplinary action for an employee or termination of the affiliation if the violation occurs by an affiliate of the firm.
Implications and Discussion for a Technology Conscious Society

Internet Security vs. Internet Privacy

Security and privacy are almost synonymous when talking about the Internet. Security is setting up ways to keep intruders from invading a computer of a client, or protecting it from attacks. Security comes in different forms such as personal firewalls, anti-virus software and routers. A breach of security occurs when a hacker is able to get past the line of security that was set-up to reach a client computer. Privacy is a subset of security; it is a matter of a client protecting his or her personal data, like e-mail lists, user ID passwords, and social security numbers from hackers. Hackers like to hack into computers and look around for information. Some are harmless while others will steal a consumer identity, load viruses, or infect and/or destroy programs.

Consumer need for security and privacy covers all facets of life. Just as a consumer installs a home security system, and locks his or her doors, the consumer needs to protect his or her computer. The current trend for the home consumer is to connect to the Internet through an “always on” broadband connection like DSL or cable, instead of the much slower dial-up connection. Additional advantages besides the faster connection speed and constant access are freeing up of personal telephone lines and the ability to download large files. A major disadvantage is that it creates a greater risk for security breaches. Most consumers are average computer users and do not fully understand the security issues that arise from “always on” broadband connections. Without this understanding, consumers mistakenly feel secure when they are not properly protected, and they are not fulfilling their need for safety.

Importance of Security

Security is an issue for all consumers that are connected to the Internet, home or firm, dial-up or broadband. It is easier for a hacker to attack a broadband connection because it often has a static IP address. This makes those computers an accessible target because hackers can work on cracking that computer over several days, weeks or months because they can return to the same computer any time that they want (Symantec Web site). Dial-up connections randomly assign a dynamic IP address each time a user connects to his or her Internet provider (Home PC Firewall Guide). Larger firms do not make consumers directly responsible for the security of their computers at the office. Firms generally install their own security systems to protect their networks, while home consumers are completely responsible for the security of their own systems in response to lack of specified responsibilities and policies. Private and personal information is stored on these computers.

Invasion of Privacy
There are numerous types of ways privacy can be violated, threatened, and online profiling can occur. Spyware is a frequent and major offender. “Spyware is technology that aids in gathering information about a client or a firm without their knowledge. On the Internet, spyware is programming that is installed on a client computer to secretly gather information about the client and relay it to advertisers or other interested parties (whatis.com).” A Trojan horse is a common method for firms to gather this information. It is a malicious program that pretends to be a harmless program, such as a screen saver or another type of utility. Once install, the program gathers personal information and sends that information back to the originator of the Trojan horse.

Advertisers can online profile, applying cookies, or small data files that a browser stores to record consumer preferences and monitor the consumer path across the Web (CNet.com Online Undercover). Firms and ad agencies use the cookies to create detailed personal profiles of the consumers. They use this information to specifically target individual consumers. They sell personal information to third-party firms that use that information to send endless spam-mail or targeted banner ads. This does not allow access to private files, but it does invade consumer privacy and opens up the possibility of an individual from the outside gaining access to the hard drive (Symantec). This gives the feel that Big Brother is always watching the consumers.

Web bugs are similar to cookies since they may also be a monitoring device and are generally invisible to non-technology specialists. Without client knowledge or permission, a firm is watching the consumers, monitoring them. Prior to the loading of the Web site, including that of a Web bug, the site needs to have the correct IP address of the consumer. When the consumer loads the Web page, the contents of the page may come from several third-party servers. Web bugs often are hidden on the third-party server pages, which send information to the Web site the consumer is viewing. Firms use them as a back-up tracking system, because they still log the consumer address if the consumer regularly deletes cookies or blocks cookies (CNet.com Online Undercover).

**Security Compromises**

Security issues come in multiple forms. Hacking gets the most media attention, but viruses are the most common security threat. Viruses are small programs that can infect a computer by rewriting files or attaching itself to a file and cause a variety of problems. Problems such as erasing an entire hard drive, forcing programs to execute unwanted commands or erasing a computer’s boot record leaving the computer completely dead and unusable. Viruses are mainly spread through e-mail, but can also be downloaded from the Internet when a consumer downloads programs from the Internet. Viruses are a concern for consumers who file share, because they are sharing files with other users that they do not know and cannot trust. The consumers do not necessarily know they are sharing infected programs with each other because a virus is not executed until the infected file is opened. Therefore, they share the infected file with other consumers, and the virus spreads throughout the Web.
Intruders illegally hack or crack into a computer connected to the Internet. Once into a client system, hackers can steal personal data, launch viruses or use that computer as a front to break into other systems anonymously. Hackers can run scanners running all night and all day that collect IP addresses allowing them to gain access to those computer’s files (Symantec). Consumers sharing information on peer-to-peer networks will be downloading large files, like movies and software programs, which can take hours to successfully download. Without securing their computers, the consumers are leaving their computers exposed for hackers to break into with their knowledge. There are different types of security software a consumer can install to protect his or her computer. There are a multitude of security software products available for purchase or free download to defend the computer and fulfill safety needs. Products, such as personal firewall, anti-virus and anti-Trojan software, will protect a computer and its data from most of the before mentioned security issues. Anti-virus software comes standard on all new computers now. Security is a serious issue. There are sites, such as Shields Up, which perform much of the same tests that hackers use to probe a computer and will give a summary assessment of personal computer security (CNet.com Online undercover). It will show what ports can be exploited. It will give suggestions as to what measure to take for protection. The consumer may buy an external firewall or a Network Address Translation router that has firewall features, instead of installing software onto his or her computer.

Firewalls and routers stop intruders before they even get into the computer. More firewalls are coming with the feature that allows consumers to stop information from leaving their computer, not just stopping information from coming onto their computer. Consumers that connect to the Internet using high-speed broadband connections should protect their machines with a personal firewall. Consumers do not need both hardware and software security protection. A personal firewall is “a packet-filled application that intercepts all IP traffic and allows and disallows information to get past it (Tech Republic). “It acts as a secondary defense against Trojan horses and other items that may slip past the anti-virus software, by blocking attempts of the unknown programs to communicate with the Internet.

Firewall software “absolutely isolates your computer from the Internet, using a “wall of code” that inspects each “packet” of data as it arrives at either side of the firewall, to determine if the information should be allowed to pass or be blocked (Shields Up).” The firewall sees each packet of data, prior to running programs on that computer, and has the power to deny those running programs from seeing those packets of information. Firewalls, however, do not give complete online security. Intruders are continually creating a new virus, Trojan horse, or discovering another method to break through a firewall, so protection must constantly be updated.

Not all personal firewalls control outbound communication with the Internet. For the past few years, only consumers with IT skill or knowledge could effectively set up firewalls that had advanced features, which meant they were limited to the use of early adapters. Alerts would not flash the program name that was trying to communicate;
instead, it would give the file name. The average computer consumer was not familiar with file names of programs and could not effectively set up communication controls.

The new advancements in security software technology are making it easier for the average consumer to use products with advanced features, such as outbound control. The advantage of outbound communication controls is that a consumer has the option of deciding when a program is called out whether to allow it one time, always or never. Windows XP offers simple and effective protection from inbound traffic, but consumers still need to get a different software package to control outbound traffic. For protection consumers ought to download products like Norton Personal Firewall, ZoneAlarm, or BlackIce. They give incoming and outgoing protection. A consumer can set them up to continually block the same information. This will give security and privacy protection to fulfill consumer safety needs.

Multi-Firm Policies and Their Comparisons

In looking at the aforementioned five firms, four of which are in highly regulated businesses, it is interesting that the telecommunications industry example does not have an e-mail policy. The Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA) regulate this firm and it is startling that neither governmental agency requires that they follow guidelines similar to those required by some of the other regulated firms. Governmental agencies and acts, including the Securities and Exchange Commission (SEC) and the Graham-Leach-Bliley Act, now govern e-mail policies, and these affect both the utility and the financial services firms. Additionally, as was previously mentioned, the JCAPO and HIPAA require e-mail policies for health care firms.

All of these agencies have similar requirements with regards to how the operations of the firms should be regulated and they can be summarized into four main areas of control: control the types of e-mail that can be sent and received, apply sophisticated filters for e-mail content to detect / block potential misconduct; audit and archive regulated e-mail communications, and offer multiple options to encrypt e-mail to maintain privacy.

These policies offer security to each applicable firm, as there is an ever-increasing threat of litigation resulting from improper use of e-mail communication the more commonplace they become. However, the specialty steel manufacturer is more indicative of the common business atmosphere with regards to e-mail, possibly due to some of the more negative impacts that over control of employees can create in offices.

According to Michalisin, Smith and Kline (1997, 2000), the Resourced-Based View of the Firm identifies knowledge employees as strategic assets. If this assertion is true, then firms, which have a high dependence on knowledge-based employees, should place great management emphasis on developing the loyalty of these employees as a means of retaining their competitive advantage. Usually hand in hand with the dependence on knowledge-based employees is an extensive dependence on computer-
based technology and communication of data, analysis, ideas and opinions between employees now a click away on the Web. Internal communications, while exceptionally valuable in their confidential state, can be easily communicated outside of the firm and present a true threat to the future competitiveness of the firm. This potential loss of control over the movement of information creates a challenge for management and represents a relatively new conflict between building loyalty and protecting the firm’s proprietary knowledge. Firms must address many issues as they develop e-mail privacy policies that protect proprietary information without alienating one of their strategic assets, their knowledge based employees.

It is projected that 1.5 billion pieces of e-mail will be sent each day in the United States (Smith and Faley, 2001, p. 9). This technological phenomenon has changed the very nature of how business is conducted. Immediate access to multiple contacts simultaneously was expected to free employees, making life easy, when in fact the opposite has occurred: the ability to attain and quickly disseminate a myriad of information has increased the pressure for quick decisions and fast results. The faster things move, the less in control employees feel. This is true of the “doers” as well as the “managers.” With the vast amount of information swirling around the firm, there is no way a manager can retain control in the old fashioned sense of the word. The hierarchy of management was not designed for such a fluid method of information transfer. In order for the manager to survive, either their management style must change or the manager must find ways to control the flow of information. Based on the characteristics common to hierarchical managers, the expected mode of behavior is to retain control at all costs. Unfortunately, in many cases the methods used to retain control boarders on invading the employee’s privacy. The new channel of information flow facilitated by e-mail allows for more detailed and permanent documentation of each and every employee’s communications.

As employers are beginning to reap substantial benefits from their investment in technology, a backlash is emerging against the intrusion into what many consider to be private communications. Many firms, however, defend their need to monitor employee communications for the protection of sensitive information, as evidenced in the many litigation actions that firms have become entangled with at an ever-increasing rate; to date the courts have backed a firm’s ownership of employee communication. The outcome of the Smyth v. Pillsbury Co. case was a significant loss for the proponents of privacy rights. The federal courts upheld that “a private sector, at-will employee has no right of privacy in the contents of his or her e-mail when it is sent over an employer’s e-mail system” (Smith and Faley, 2001, p. 13). However, just because the courts allow firms to monitor their employees does not mean that it is in the best interest of the firm to do so. “Surprisingly, at a time when privacy issues are receiving more publicity, many firms are competing openly to develop loyalty among their employees, especially knowledge employees” (Smith and Faley). Any employee who fears that they are under electronic surveillance at the office would be hard pressed to feel a sense of loyalty toward their employer. The message in the Smith and Faley study is that, while firms do have a legitimate interest in the information contained in their employee’s correspondence, management must be “sensitive to the needs of their employees for
privacy, as they push toward performance measurement to develop sustainable competitive advantage. Hence, knowledge employees have to develop the confidence that e-mails are communicated freely, without fear of censorship and retaliation from their employers, within their intellectual Web sharing network to sustain competitive advantage, in order to facilitate the free flowing of ideas that is required to reap the maximum potential from perhaps their most valuable strategic asset.

**Recommendations**

While the direction of litigation related to e-mail usage appears to indicate that firms should implement comprehensive e-mail policies, it is probably most imminent for the telecommunications infrastructure firm that was noted in this study. It can easily be anticipated that a regulated industry, such as this is likely to be the next target of increased governmental e-mail policy controls, and preparing for such a regulation will minimize the impact.

Research into e-mail policies suggests that an appropriate e-mail policy will contain the following objectives:

- Commercial objective: a firm can recommend the proper e-mail etiquette in an effort to add professionalism to e-mail replies and therefore gain competitive advantage.

- Productivity objective: research shows that firms realize an annual cost of $4,400 per employee for the time that employees spend using e-mail for non-office related activities ("The path to secure enterprise e-mail," 2001) and as such a formal policy will explicitly outline guidelines to be followed to enhance productivity and avoid misunderstandings.

- Legal objective: by having a formal e-mail policy in place, a firm may be able to mitigate the risk and potential liability associated with lawsuits that may arise from inappropriate e-mail usage.

Firms should solicit input from Human Resources, Information Technology, and both executive level and front-line employees for review and feedback related to the policy. It is necessary for the firm to make employees aware of the policy by publishing it on the intranet or through distribution of employee handbooks. If employees understand the possible threats of inappropriate use of e-mail, they will understand the consequences of violating the rules in the policy. The policy should address the penalties, such as suspension or termination of employment, and other legal ramifications that may be brought against them.

Due to the rapidly evolving technologies relating to e-mail and the Internet, it is essential to review e-mail policies, and be knowledgeable of new developments in e-mail and e-Commerce rules and regulations. Any changes or updates to an e-mail policy should be clearly communicated to all employees via the same methods as the original
policy. As suggested by Jacobides and Croson (2001), it is clear that managing information requires considerable attention, but limited study has been done to date regarding the impact of information management as compared with other variables on the effectiveness of agency relationships within firms. Information technology, which includes computers, telephones, video cameras, statistical process controls, spreadsheets, e-mails and on-line performance databases, are excellent performance tools, but increased monitoring does not always better enhance the value creation process. Concerning information policies (IP), based on work by Jacobides and Croson (2001), “… there is absolutely no reason to believe technology causes IP to move in a straight line; although monitoring may be much cheaper now than before, consuming more monitoring (even without spending more) is not necessarily an efficient use of resources”. Hence, e-mail and technology should be used for self-monitoring and reputation tracking, rather than exclusively for explicit performance, alleviating pressures to meet metrics and thus corrupt information about actual performance.

Implications and Conclusions

E-mail continues to grow daily and is expected to reach 35 billion messages by 2005 (“The path to secure enterprise e-mail”). In addition, e-mail is now considered permissible evidence in legal proceedings and is often considered binding authorization in business transactions and yet only about half of the firms in this country actually have e-mail policies and use monitoring equipment/software to enforce them (Yaukey, 2000). This growth represents an ever-increasing threat for firms. There is a delicate balance where an employee feels comfortable in a creative environment, without the fear of office place intimidation.

These issues concerning Internet privacy and security have spilled into e-mail and instant messages, as well and are being battled in the courts, and are setting precedent as more employees are utilizing communication that can be employer monitored. In the aftermath of the September 11, more firms may be looking at more protection to their facilities. Even the U. S. Attorney General requested more liberty to monitor those suspected of terrorist activities, without subpoenas. The office place was never considered a democracy. This situation in effect leaves the majority of domestic and international employees with little or no protection for their expectations of privacy. Employees are being monitored in the name of security, and knowledge employees should understand this when they accept a position of some authority and responsibility.

It is important to mention that human resources are important to the competitive advantage of firms. The better this is fostered and respected, the better chance the firm has to succeed. Employers should state in their firm policy the specific parameters for employees, in regards to communication and monitoring. This is a place to start, at least, since many employees feel violated when they are unaware of monitoring. With scandals such as Enron and WorldCom, numerous firms may be faced with new and more restrictive regulations. Unfortunately, corporate cover-ups have been happening all too frequently. It is hard to say how knowledge management and its management of electronic media will be effected in response to new regulations as fallout. The current
situation leaves the majority of employees with little or no protection for their reasonable expectations of privacy. There is a simple rule, however, that directly applies to individuals and firms with regards to e-mail and its usage: “If you do not want to read it in tomorrow’s newspaper, do not put it in e-mail today, a suggestion introduced in this study.
References


Journal of e-Business and Information Technology

Instructions for Authors

Aims and Scope of the Journal

The Journal of e-Business and Information Technology is a semiannual international journal which aims to publish articles of high quality dealing with how online business technologies relate to the information technology, addressing various e-business forms and their evolution, and covering all aspects of IT, particularly those touching the Internet.

The intention of the Journal of e-Business and Information Technology is to help the local and global business communities to efficiently exploit IT towards the creation of business value in e-business. The journal welcomes all types of applied research studies in global computing that add value to e-business owners, customers, developers, and evaluators. That is, applied studies in IT, online business technologies (all e-business forms, e-commerce, etc.), and Internet security are particularly sought.

Areas of interest for the Journal include:

- all forms of e-business
- EDI
- e-commerce
- Decision Support
- Data Warehousing
- Data Mining
- Biometrics
- Internet Security
- Cyber Law
- Knowledge Management
- Information Security Auditing

Relevant manuscripts from the field of IT, not in the areas of the Internet or online business technologies, are also considered if they bear implications for the creation of business value in e-business.
The audience of the Journal are members of the local and global business communities, researchers, students, and industrial practitioners doing global computing.

**Preparation of a manuscript submission**

Five copies of the manuscript should be sent to the Editor-in-Chief or one of Associate Editors of the Journal.

Manuscripts should be printed on 8½x11” paper, one side only, leaving 1” margins on all sides. Please single space all materials, including footnotes and references. Number pages consecutively with first page containing the title, the authors, the affiliations, a short abstract (between 150 and 300 words), and five to 10 key words.

It is important that your abstract and key words are as most informative as possible since they are used in identifying appropriate reviewers for your manuscript.

**Exclusivity of submission**

The first page of the manuscript should include the statement “This manuscript has not been submitted elsewhere in identical or similar form, nor will it be during the first 6 months after its submission to the Journal of e-Business and Information Technology.”

**Illustrations**

Only clear reproductions of artwork should be submitted. Authors should keep original artwork until the manuscript is accepted. All figures should be in a form suitable for reproduction.

Each figure and table must be mentioned in the text and numbered consecutively using Arabic numbers in the order of appearance in the text. For the initial submission of the manuscript, the figures and tables should be integrated into the text as much as possible, rather than being inserted at the end of the manuscript.
References

References should be inserted, for books, journals, and articles in proceedings, and technical reports, as follows


Permissions

Authors are responsible for obtaining permission from copyright owners if they use an illustration, table, or lengthy quotes from material published elsewhere. The authors should write to both the publisher and the author of material they are seeking to reproduce.

Copyright

The copyright will be established in the name of AIMIT.

Offprints

Each author will receive a free copy of the Journal issue containing the published article.

Further information

Further information may be obtained by writing (see address below) or emailing to the Editor-in-Chief at braggad@pace.edu or by accessing http://www.aimit.org.

Bel G. Raggad, Editor-in-Chief
861 Bedford Road
School of Comp. Sc. and IS
Pace University
Pleasantville, NY 10570
Phone#: (914) 773-3448