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The Internet Intermediary: Gateway to Internet Commerce Opportunities

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I have completed coursework toward a Ph.D. degree in Management Information Systems (MIS) from the University of Wisconsin-Milwaukee. My career has allowed me to be active in the practice of purchasing in Higher Education while being involved in related academic research. The focus of my research has been on Internet commerce, more specifically Internet intermediaries.

Introduction

Given the projections that internet commerce will grow astronomically over the next four years, firms of all sizes must become proactive in not only seeking out Internet opportunities, but in determining ways to exploit this revenue generating medium. The environment presents such opportunities right now in the form of the Internet intermediary.

Trends indicate that firms should already be involved in Internet commerce. At minimum, firms should be beyond the information-seeking only stage and actively involved in Internet commerce to some extent. They should already be experimenting with the Internet as a medium for conducting business transactions. Although the possibilities of being an industry leader have already passed, there still is time to become an active player in Internet commerce. That entry point could easily be the use of Internet intermediaries to acquire the non-production consumable materials/services, a segment of every firm's operational, repair, and maintenance materials and services needs (ORM/MRO).

The clock is ticking and necessity seems to be clearly dictating that Internet commerce needs to become part of one's business thinking now and woven into the fabric of the firm's strategic business plan.

Internet Commerce

Depending on which trade journal one picks up and to whom you make reference, Internet commerce is predicted to have tremendous growth into the 21st century. Even as far back as late 1997 Blane Erwin, director of Forrester's Business Trade & Technology Strategies authored a report with highlights in the September 1997 "Computer Dealer News" that predicted I-commerce growth to rise from $8 (U.S.)

billion in 1997 to $327 billion (U.S.) by the year 2002. At the same time International Data Corporation (IDC), Framingham, MA., provided a more conservative projection of electronic commerce being $10 billion in 1997 rising to more than $220 billion by the year 2001. More recent predictions, September 1998, John Gantz, IDC senior vice president, announced his projection that this number will approach one trillion dollars by 2002. It is also felt that 80% of that volume is business-to-business transactions with expectations of that growing to 92% by 2003 [Cohn et al. 2000, Regan 1999, Stoneman 1999]. Regardless of which projection one values, the reality is a significant increase of Internet commerce activity within the next two to three years. The bottom-line is that substantial growth in Internet commerce is inevitable.

It is suggested that an evolution not unlike that of EDI when it first evolved is taking place but with the emphasis on the buyer and not the seller [Bakos 1991 & 1997, Gurley 1997]. It is also clear that the opportunity to be a player does not carry the same restrictions of EDI, nor is one limited by current participation in EDI. Generating revenue on the Internet is much more opportunistic. This trend is re-affirmed in a study done by Forrester Research, Inc., where they predict the growth of Internet commerce as a channel of revenue to increase from 15% in 1997 to 42% in 2001 (see figure 1).

Figure 1. Internet Commerce: "Within your business unit, which channels generate revenue?"

Source:Forrester Research, Inc. (July 1997)

Research shows that most sellers will be dragged into Internet Commerce by their customers [Gurley 1997]. There is a fast growing interest to have options for both on-site and off-site transactions with the expectations that off-site will include Internet commerce. Several models are put forth as having potential, but the most pertinent deals with automated purchasing; it prescribes the use of the Web as a medium to acquire non-production goods and services through established business partners, not unlike current EDI methods. Another model suggests a more anonymous exchange where the product is considered homogenous. In this model, decisions will be based on the information and not on the identity of either the seller or the buyer. Current trends also suggest that Internet commerce is clearly dominated by the buyer, making it a buyer's market (buyer-centric) [Coy 1998, Gurley 1997, Elliot 1997, Wrenden 1998]. However, the ground rules for leveraging the new buyer-centric model have yet to be established.

Internet commerce is past the experimental stage and it may even be past the early-adopter stage in spite of the continued threat of prohibitive technology barriers and operational problems. Although ongoing discussions on standards, interoperatability, security, bandwidth, intellectual property protection, content regulation, fraud, import/export controls, taxation etc. continue to happen, it is recognized that their

impact has an overall global effect on Internet commerce. As such the impact will be felt as a whole and will thus require ongoing tweaking by developers of any solution application(s) put into use as regulations and standards are enacted.

Even after considering all of the valid issues that the use of technology imposes, there is another possible non-technology threat that certainly needs to be taken into consideration. One must take into account the threat to the current reseller-intermediary "middle-man" [Sarkar et al. 1997 & 1998, Vizard 1997]. The question is raised as to whether one can expect resellers to take this predicted shift of manufacturer-to-consumer buying in stride (dis-intermediation). It is believed that any significant migration of consumer to manufacturer activity is a good reason for resellers to penalize web-based manufacturers for abandoning the traditional reseller by threatening with a possible move to their competition. This has serious impact when it is based on the perception that the majority of the public does not buy over the Web yet, and therefore manufacturers cannot afford to alienate traditional resellers.

In spite of the above concerns and issues, Internet commerce continues to grow and solutions are being developed to address most of the identified problems. This is recognized as a continuous effort as new issues surface. Experts agree that Internet commerce is fast becoming a popular medium in which to conduct business-to-business transactions [Cohn et al. 2000, Regan 1999, Stoneman 1999, Malone et al. 1989] (see figure 2). At minimum the Internet will be evaluated as to how it can bolster the firm’s competitive edge. Research addresses this in particular by presenting the discussion that firms need to use technology as a means to expand their "bounded rationality" [Bakos & Treacy 1986], more specifically, technology will allow a firm to go beyond its information processing limitations by using what technology and now the Internet have to offer.

Figure 2. E-Commerce's Hot Spot Business-to-Business Commerce (Revenue in Billions)

Source:Forrester Research, Inc.

Considering the projections for Internet commerce and the observed growth of the Internet itself, there are reasonable expectations that Internet commerce is more than a fad. In addition, the adoption of the Open Buying Internet (OBI) standard further supports that big firms who are EDI players now are looking at ways to utilize the Internet for more commerce [Chronister 1997, Avery 1997]. It becomes a safe assumption that Internet commerce must be incorporated into the business strategy of all firms. It is also

predicted that once the use of Internet commerce becomes a commonplace activity, the advantage quickly switches to a strategic necessity [Green et al. 1998, Bakos 1991]. Firms can no longer ignore this means of potential revenue-generating medium. All firms must look for the most efficient mechanism to enter into the Internet commerce market whether they intend to buy or sell.

The Internet Intermediary

One can ask how a firm might make the transition from predominately retrieving information from the Internet to actively using it for commerce. The novice is being cautioned not to just jump in and attempt to partake without some planning and a strategy. A possible solution that already exists is in the form of currently available Internet intermediaries. The intermediary concept is not new to the Internet, and it is far from being fully exploited. Players are moving in and out of this market niche as opportunities permit.

Besides providing an entry point of access to Internet commerce, the Internet intermediary provides a multitude of critical benefits. To formulate an action plan, an organization needs to have a strategy based on key factors which can be supported by the roles of an Internet intermediary. The specific roles of the Internet intermediary can be identified as the six functions stated in table 1.

Table 1. Intermediary Roles and Definitions

Access	**Enhancing the access to decision-making information by exploiting the use of contemporary technology.**
Aggregation	**The collecting of many demands from buyers and many products from sellers.**
Costs	**All costs directly affecting the overall cost that the buyer pays to take ownership of the product/service.**
Facilitation	**The act of enhancing the ease of performing the economic exchange.**
Trust	**Assurance of maintaining honesty, integrity, reliability, legitimacy, etc. to the economic transaction.**
Value-Added	**Additional worth which is not directly associated with the cost.**

(based primarily on Chrusciel & Zahedi 1999, Bailey 1998, Bakos 1991, Bailey & Bakos 1997, Knill 1998, Sarkar et al. 1997 & 1998, Peterson et al. 1997)

Whether one intends to buy, sell or take on the function of the Internet intermediary, the roles are important factors against which to measure business strategies. To get a better understanding of these roles, the beneficial attributes can be categorized under each defined role stated above which provides further clarification and definition. The roles of the Internet intermediary can then be further refined by their corresponding benefits as follows:

Access: Provides access 24 hours, 7 days/week, 365 days/year. Prohibits movement of unwanted information (junk mail). Serves as a means to curtail information overload. Provides, establishes, and enhances communications standards. Provides for a secure channel to transact business. Extends business from local to global market. Promotes the use of new technology. Makes available a scalable architecture. Takes care of the infrastructure needs for all clients (guaranteed uptime). Provides a training ground for the novice firms entering the Internet. Authenticates and validates genuine business users.

Aggregation: Provides a forum for transactions of multiple products from multiple sellers. Ongoing recruitment of clients (buyers & sellers). Ongoing search for new potential markets/products. Bundles multiple services/products into a single priced package. Allows for side-by-side product comparison.

Costs: Reduces Costs: Coordination of players (link buyer & seller), Searching (looking for best fit, product features), Processing transactions (quicker and less resource consuming), Information gathering to determine product prices (includes manufacturing costs and all distribution costs), Helps to avoid "Deadweight" costs (lost costs due to unsuccessful searching), Provides for economies of scale investing in technology.

Facilitation: Provides a dictionary of terms for merchandise/services. Improves chances for linking best fit for buyer & seller. Facilitates information exchange between producer and end-user. Collects information on buyers' preferences. Tracks market information and transaction data. Provides for a controlled information link from end-user back to manufacturer. Handles the interfaces for accounting and financial. Provides the forum which relieves the manufacturer from the obligation of dealing directly with the end-user. Provides forum for end-user to avoid having to sift through large quantities of information to determine important decision factors.

Trust: Prevents opportunistic behaviors & unfair trade practices. Buffers/mediates interests of buyers against interests of sellers. Assures against transaction failures. Allows for the complete processing of business transaction(s). Enhances business activity by reputation. Provides some commerce regulation where there is none now. Extends credibility to products/service.

Value-Added: Introduces/identifies uniqueness of services & products. Enhances product-line with differentiation. Informs buyers about availability. Provides detailed product specifications. Makes available a forum for advertising and marketing new or existing products.

It is also understood that the intermediary will avoid limited partnerships which lock out potential clients.

Some of the additional benefits include the direct involvement to risk aversion, tracking of market information, providing product information, providing a forum for multiple products from multiple sellers, monitoring of transaction data, and promoting new technology after being tested [Chrusciel & Zahedi 1999, Bailey 1998, Bakos 1991, Bailey & Bakos 1997, Coy 1998, Knill 1998, Peterson et al. 1997,Plonien 1998, and Sarkar et al. 1997 & 1998]. What one sees is that the Internet provides for additional options and/or enhances the role of the intermediary in dealing with the attributes of the functions prescribed. Action on the part of either the buyer, seller, or a third party can become the first step in the foundation upon which firms can begin to exploit what the Internet has to offer.

Intermediaries are already well-entrenched in the business model of most firms where they play an active role in the supply chain. This is also supported by a survey conducted by "Purchasing Online" magazine in May 1999 [Avery 1999], where the respondents affirmed the ongoing interest in using distributors (intermediaries) to continue to acquire the supplies/materials which fall into the category of maintenance, repair, and operations (MRO – see figure 3).

Figure 3.

The acceptance of the potential role of the intermediary leads us into determining what type of products can and should be made available over the Internet. If the products/services are simple to describe and/or they can be described via industry standards, or more specifically if products/services are not asset specific, and are low in description complexity, then these products/services will tend towards the Internet which promotes an open market [Williamson 1991, Malone et al. 1987]. It is from this theory that the suggested area of concentration be the non-production consumable materials and services that are traditionally categorized in the MRO.

This category of expenses is grouped in the operating resources budget of the firm and can include such commodities as: office supplies, travel, electronics, groceries, apparel, audio/video equipment, computers, gifts, etc. This category of merchandise, which is low in complexity and low in asset specificity, and viewed as meeting the conditions prescribed above, are a very likely channel for Internet commerce [Peterson et al. 1997]. This is already being observed by the research of Forrester Research, Inc. where they have captured and compiled a listing of the high revenue generators in the Internet commerce market to date (see figure 4).

Figure 4.

It is further suggested that efforts in capturing savings by improving efficiencies in the managing of operating resources which includes the MRO categories can be realized and that these savings can affect the profit line directly [Killen & Associates 1997]. The value of these operating costs is identified by a corporate cost breakdown developed by Forrester Research and Killian (figure 5).

Figure 5. Corporate Cost Breakdown, Operating Costs take the biggest bite;

Source: Forrester Research and Killian (1997)

Speculation on what type of firm would be the best intermediary is another item for further discussion. Time is already proving what research has proposed, that new ventures will be formed and/or existing institutions will step up to fill the gap in Internet commerce [Galbraith, 1977]. Simply stated, new entities form to fill information gaps and needs. Possible entities that could easily become the intermediary are unlimited. There is however a natural attraction to this role for existing non-Internet intermediaries, financial institutions, parent corporations of conglomerates, governmental agencies (federal and/or state), and consortiums of buyers or sellers.

Conclusion

The conclusion that can be drawn from the discussion is that firms must take immediate action and get involved with Internet commerce. However, one should do so prudently and with a defined business strategy. One such entry point is via intermediaries. The Internet intermediary provides an immediate opportunity for most firms to engage in Internet commerce. The Internet intermediary in turn becomes a business partner dealing with the specifics of transacting business via the Internet. In the business-to-business market, it is also believed that one of the initial market areas that will be influenced is the maintenance repair and operations (MRO) type of products and services. It behooves those firms which are not actively engaged in Internet commerce to not delay their entry for much longer or risk missing the boat. A note of caution is advised that one should address Internet commerce based upon identified benefits which can be attributed to specific Internet intermediary roles. The concern is no longer whether the time has already come and gone for the industry leaders; instead the focus is now on Internet commerce for future business survival. As the Internet opens what once were restricted geographical markets to what is now being viewed as a global playing field, delaying entry into Internet commerce could prove to be fatal regardless of the type or size of the firm.

References

Avery, S., "Are Distributors going the extra mile?" *Purchasing Online*, May 6, 1999.
Avery, S., "Establishing the Baselines," *Purchasing* (123:1), July 1997, pp213, 216-217.
Bailey, J.P. "Intermediation and Electronic Markets: Aggregation and Pricing in Internet Commerce," Ph.D. Dissertation, MIT, May 1998.

Bailey, J.P., and Bakos, Y. "An Exploratory Study of the Emerging Role of Electronic Intermediaries," *International Journal of Electronic Commerce* (1:3), Spring 1997, pp.7-20.
Bakos, J.K., "Reducing Buyer Search Costs: Implications for Electronic Marketplaces," *Management Science* (43:12), December 1997, pp. 1676-1692.
Bakos, J.Y. "A Strategic Analysis of Electronic Marketplaces," *MIS Quarterly* (15:3), September 1991, pp.295-310.
Bakos, J.Y., Treacy, M. "Information Technology and Corporate Strategy: A Research Perspective," *MIS Quarterly* (10:2), June 1986, pp.107-119.
Chronister, K. "Net-based buying model debuts," *Electronic Buyers' News* (Issue 1062), June 1997.
Chrusciel, D. and Zahedi M., "Seller-Based vs. Buyer-Based Internet Intermediaries: A Research Design," AIS AMCIS 99, August 1999.
Cohn, L., Brady, D. and Welch, D., "B2B: THE HOTTEST NET BET YET," BusinessWeek, January 17, 2000, pp. 36-37.
Elloit, H. "Revamping their image," *Electronic Business Today* (23:10), October 1997, pp.26.
Forrester Inc. "Forrester Research Finds Internet Business Trade to Jump to $327 Billion by the Year 2002," Forrester Research, Inc., News Release, July 1997.
Galbraith, J., (1977)Designing Complex Organizations, Addison-Wesley, Reading, MA
Green, H., DeGeorge, G. & Barrett, A., "The Virtual Mall Gets Real," *Business Week*, January 26, 1998, pp.90-91.
Gurley, W.J. "Seller, beware: The buyers rule E-commerce," *Fortune* (136:9), November 1997, pp.234-236.
Killen & Associates (press release), "Operating Resources Management(ORM) Software to Grow to $725 Million Year 2000," (June 5, 1997) reports that savings in the ORM drops directly to the bottom line with an increase in profits
Malone, T.W., Yates, J. and Benjamin, R.I., "Electronic Markets and Electronic Hierarchies," *Communications ACM* (30:6), June 1987, pp. 484-497.
Malone, T.W., Yates, J. and Benjamin, R.I. "The Logic of Electronic Markets," *Harvard Business Review* (67:3), May-June 1989, pp. 166-167, 168, 169.
Peterson, R.A., Balasubramanian, S., and Bronnenburg, B.J. "Exploring the Implications of the Internet for Consumer Marketing," Journal of the Academy of Marketing Science (25:4), Fall 1997, pp.329-359.
Regan, M.B., "E-commerce changing way of business New times: The Internet has touched off an online earthquake across nearly every industry," The Atlanta Constitution, Atlanta, GA, April 7, 1999, pp. D;3.
Sarkar, M.B., Butler, B. and Steinfield, C.,"Intermediaries and Cybermediaries: A Continuing Role for Mediating Players in the Electronic Marketplace," JCMC (1:3), September 1997, pp. 1-13
Sarkar, M.B., Butler, B. and Steinfield, C., "Cybermediaries in Electronic Marketspace: Toward Theory Building," Journal of Business Research(41:3), March 1998, pp. 215-221.
Spulber, D.F, "Market Microstructure and Intermediation," *Journal of Economic Perspectives* (10:3), 1996, pp. 135-152.
Stoneman, B. "Anticipating Paperless Purchasing," The Public Purchaser(2:6), November/December 1999, pp. 22, 24-26.
Tweney, D. "Don't blame Net consumers for slow I-commerce growth," *InfoWorld* (19:40), October 1997, pp.104.
Vizard, M. "I-commerce may be a tough sell after all," *InfoWorld* (19:37), September 1997, pp. 3.
Williamson, O. "Comparative economic organization: The Analysis of Discrete Structural Alternatives," *Administrative Science Quarterly* (36), 1991, pp. 269-296.
Wrenden, N., "Reader Survey," *Beyond Computing* (7:9), November/December, 1998, pp. 19-26.