December 2001

An Ethnographic Investigation of the Emergence of an Electronic Commerce Initiative: A Critical Perspective

Hope Koch

Texas A&M University

Follow this and additional works at: http://aisel.aisnet.org/amcis2001

Recommended Citation
http://aisel.aisnet.org/amcis2001/411

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2001 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
AN ETHNOGRAPHIC INVESTIGATION OF THE EMERGENCE OF AN ELECTRONIC COMMERCE INITIATIVE: A CRITICAL PERSPECTIVE

Hope Koch
Texas A&M University
hope-koch@tamu.edu

Abstract

This research combines ethnography with a critical perspective to understand the real business reasons behind the development of a business-to-business (B2B) electronic commerce (EC) exchange. In using grounded theory (Charmaz, 1983; Strauss & Corbin, 1997; Strauss & Corbin, 1998) to analyze my field notes, I found my main informant, a Chief Information Systems Officer (CIO), emancipating herself from the professed economic reasons for the organizations banding together to form the B2B EC exchange and discovering that underlying power issues and a bandwagon effect contributed to the four organizations coming together to form the B2B EC exchange.

Keywords: Critical, electronic commerce, ethnography, power

Introduction

As information technology (IT) scholars, we find ourselves in a field researching the latest trend (e.g. intelligent agents, enterprise resource planning, knowledge management and the list goes on). A look through any trade press magazine will result in pages upon pages of businesses reporting their involvement in the latest IT trend. The reports usually go something like this:

“We are adopting _______ to better serve our customers and make us more efficient and effective.”

This paper uses the critical perspective (Calhoun, 1995; Mumby, 2001; Ngwenyama et al., 1997a; Ngwenyama & Lee, 1997b; Orlikowski & Baroudi, 1991) to report the results of research on one business-to-business (B2B) electronic commerce (EC) initiative. This paper reports my main informants emancipation from the professed economic reasons for the development of this B2B EC initiative by comparing the company line evident in trade press releases to her reflections on why the four organizations came together to create the B2B EC exchange. The discussion, will begin with the project’s background and the research method; then will explain how the project originated, how each of the four organizations got involved, and how the system is being designed.

Project Background

This ethnography traces the development of an on-line exchange. The word “exchange” used throughout this paper refers to a B2B EC exchange, which is envisioned as an entire industry (e.g. buyers, distributors, and sellers) using the Internet to participate in an “open” market place in which anyone can buy from anyone else and in which information can be shared throughout an industry. The term exchange comes from Levine and White’s (Levine & White, 1961) and Cook’s (Cook, 1977; Cook & Emerson, 1978) definitions: “any voluntary activity between two organizations that helps them to realize their goals” (Aldrich, 1979; Cook, 1977, p.64) or “a transaction involving the transfer of resources between two or more actors for mutual benefit”(Cook, 1977, p.64).
The vision of the exchange is to “bring the fragmented food store industry together” (Undisclosed, ). The exchange will include a web site with links to everyone participating (e.g. manufacturers, distributors, retailers, and service providers in the industry). For example, a food storeowner in St. Louis, Missouri could use the exchange to locate everything from a cola manufacturer to a small business in the local area that does parking lot resurfacing.

Included with these links to participating organizations is the ability to communicate timely information regarding product promotions. For example, if a candy manufacturer is having a promotion on gummy worms, members of the exchange will be able to learn about the promotion immediately on-line rather than the traditional way. Traditionally, promotions were communicated by having a manufacturer send printed catalogues to a distributor, the distributor would then mail or hand-deliver the catalogues to the retailers. Given this process, the lag time between the origination of a promotion and a retail stores’ awareness was significant.

On-line product ordering will also be included as part of the exchange. For example, a food storeowner in St. Louis, Missouri could shop for new store uniforms on the exchange, buy the uniforms, and have the uniforms delivered to their store with their regularly scheduled deliveries. Currently, as many as twenty trucks may deliver products to any given store in a single week. The vision of the exchange is to have one truck deliver products to the store as needed. So, rather than having UPS deliver the uniforms directly to the food store, the uniform manufacturer would ship the uniforms to a central warehouse and then the uniforms and the rest of the order for that week would all be delivered at once.

The exchange will also include software that will allow food storeowners to manage from afar. This will include a scheduling tool similar to Microsoft Outlook or the check-off lists that we see in food store bathrooms. The tool will allow storeowners to schedule the timing of routine tasks and provide store clerks the ability to confirm the completion of the task. Food storeowners can then dial in to the exchange and verify that the task has been marked as accomplished.

The ideal for the exchange evolved as an extension of Stop-N-Buy’s extranet, which was available only to its’ five hundred retail food stores. The initial investors in the exchange are Speedy Distributors, EC Technology Company, and We Make It Manufacturers (Undisclosed, ).

Research Method

This ethnography (Charmaz, 1983; Emerson, 1983; Emerson et al., 1995; Gubrium & Holstein, 1997; Strauss et al., 1997; Strauss et al., 1998; Yin, 1994) is based on interviews and observations. I conducted four in-depth open-ended interviews with a member of the exchange’s founding board. Since these interviews were in my main informant’s office, I was able to observe my informant in her daily work routines. I interviewed one operational level person whose role was relaying business expertise to the designers of the exchange. Each of these interviews was approximately ninety minutes long.

I also observed one board meeting and one management meeting. The board meeting was a ninety-minute conference call, which included all but one of the representatives from each of the founding organizations involved in the exchange. The management meeting involved the top executives of Speedy Distributors, which included one member of the exchange’s founding board.

I corroborated interview and observation data with a weekly review of the “trade press”, the exchange’s web site, and internally generated data about the project.

I used grounded theory (Charmaz, 1983; Strauss et al., 1997; Strauss et al., 1998) including line-by-line analysis, open coding, and focused coding to determine the main categories in my field notes. The issue of emancipation from professed economic justification for this B2B EC exchange emerged based on the analysis.

---

1In order to maintain the confidentiality of the organizations that I studied I have used pseudonyms for the organization names. In addition, I have not disclosed the trade press sources where I received some of my information.

2An extranet is part of a company’s internal computer system that is available to people outside of the company, for example customers or in this case store owners.

3This study was reviewed and approved by the Internal Review Board (IRB) in October, 2000.
Influences on the Project’s Development

I became interested in studying the development of the exchange when I read a news release stating that Speedy Distributors, Stop-N-Buy, and EC Technology Company had entered a joint venture to create an online exchange (Undisclosed, ). Like many press releases, this project’s initial press release touted the big names and expertise of the large corporations involved, the exchange’s benefits, and the technology. The press release went on to say “that the idea was hatched as a way to extend an extranet that was originally built for the owners of Stop-N-Buy’s retail stores” (Undisclosed, ). While the press release makes the ideal for the exchange sounds very “neat”, in my research I found the ideal for the exchange was also influenced by some very real business challenges. By discussing these influences, I am digging beyond the surface to reveal the real business issues and power relations involved in this EC project.

The ideal for this exchange actually evolved from some challenges Stop-N-Buy was facing with an internet-based retail business that they had implemented several years ago. I’ll first discuss how power and control influenced the original internet business and how the technology life cycle, the cost of technology, and the jobber’s desire to have standard operating procedures influenced the development of the exchange (Figure 1).

Stop-N-Buy’s original internet-based business was a mechanism to standardize the management of hundreds of corporate-owned stores. Thus, the power of the large corporation and the corporate executives’ desire to control the operation of corporate stores influenced the development of the original internet-based business. The following excerpts from my field notes relate to the exchange’s control component and illustrate why the corporate executives wanted a computer system to control the operation of the food stores.

- “The store managers are usually not very smart, they may be drunks, and they usually are employed anywhere between 30-40 days before moving on to another job.”

- “The exchange 4 is really helpful, especially with the labor shortage of food store clerks. This way the owner can make sure that the clerks are trained and things are being done in a certain way even if the owner is not there.”

- “The exchange keeps up with everything from the moment the employee clocks in (if they are sober enough) and then what they should be doing. It will tell them to open the till first thing in the morning rather than ice down the beer because beer can’t be sold until after 12:00 pm.”

- “The exchange allows the food store owner from miles away to get on to the system and see what is going on at all of the stores they own.”

While corporate power and control influenced the development of the internet-business initiative preceding the development of the exchange, the challenges that this initiative faced influenced further development of the ideal of an open exchange.

One of the biggest influences on the ideal of an “open” exchange was the technology life cycle (Laudon & Laudon, 1998). The technology that formed the foundation of Stop-N-Buy’s original Internet-based business had become out of date before the technology was fully depreciated on the corporation’s financial statements. Faced with the need to finance the upgrade of the technology and with the ideal that the useful life of new technology would continue to decrease, Stop-N-Buy saw opening up their original ideal and technology to others in the industry as a way of helping finance the technology upgrade costs.

---

4The word exchange is used here even though I am referring to the original Internet based business. The mechanism for controlling how the stores in the exchange are operated grew out of the original Internet based business.
Another influence on the development of the “open” exchange was pressure Stop-N-Buy was receiving from food storeowners, as expressed in the following field note excerpt:

“Stop-N-Buy has about five thousand food stores, (five hundred are company owned and forty-five hundred are owned by jobbers). The five hundred company-owned stores could use the internet-based system to operate their stores because they were corporate stores. The other forty-five hundred stores could be any type of food store. These stores could not use the internet-based system to operate their stores. The problem is that one person may own fifty stores, seven corporate stores and forty-three other stores. These independent owners like to have a variety of stores because different stores appeal to different types of people. If a Stop-N-Buy is next door to a Hamburger Heaven some people will prefer Stop-N-Buy while others prefer Hamburger Heaven. The independent owners wanted to have the same way of operating all of their stores and so they wanted to use the internet-based system for their non-Stop-N-Buy stores also.”

The purpose of this section was to move past the trade press and explore in more detail what influenced the development of this exchange. This exploration showed that power (Hickson, 1974; Hickson et al., 1981; Mumby, 2001; Pettigrew, 1973; Pfeffer, 1981; Salancik & Pfeffer, 1977), control (Ouchi, 1977; Perrow, 1986), the technology life cycle (Laudon et al., 1998), the cost of technology, and the desire for standard operating procedures all influenced the ideal of an open exchange. The next section will explore what influenced the organizations involved in the exchange to participate.

Influences on Corporate Participation

This section explains why the four organizations joined the exchange by reporting on my main informants reflections of the real influences leading to each member organization's participation. In some sense, this section shows my main informants emancipation from predominant economic explanations for why organizations joined the exchange to a focus on the role of power in getting organizations to join the exchange. This section analyzes why each of the four members in the exchange got involved by discussing their stated reason for participating, what influenced their decision to participate, the stated reason they were asked to participate, and the influences on why the organization was asked to participate. The analysis is limited by the information available in the trade press and by what was discovered in the research.

Stop-N-Buy originated the ideal for the exchange. Some of the stated reasons for Stop-N-Buy’s origination of the exchange include (Undisclosed,):

- “extending an extranet to a wider group of users”;
- “reinventing the way we do business and leading us to higher levels of performance and profitability in the new economy”;
- “implementing our strategy of identifying, incubating, and participating in the creation of independent marketplaces”; and
- “achieving savings in purchasing throughout our stores”.

My main informant explained that that there were also some very practical influences on Stop-N-Buy’s decision to develop an open exchange. Stop-N-Buy needed to finance new technology as the technology that the original internet-based business was based on was in need of replacement and yet not fully depreciated. The thought that the useful life of technology was going to continue to decline while costs were going to continue to rise further influenced the decision to develop an open exchange. In addition, jobbers who owned both corporate and non-corporate stores wanted to use the original internet-based system for all of their stores; the original system was only available to corporate Stop-N-Buy stores.

The trade press explained that Stop-N-Buy teamed up with Speedy Distributors to develop the exchange because of Speedy Distributor’s “state-of-the-art fulfillment and distribution expertise” and “their technology” (Undisclosed,). Speedy Distributors reported their decision to join the exchange to the trade press as an effort to (Undisclosed,):

- “continue our active involvement in bringing innovation and new ideas to the food industry”;
- “effectively improve efficiencies for all our retailers”; and
- “to achieve savings through distribution channels”.

---

3A jobber is a storeowner that owns many different food stores that go under different names (e.g. someone that owns ten hamburger shops with ten different names).
My informant’s reflections lead to her emancipation from these economic justifications for joining the exchange and to her explanation of other factors that also influenced Speedy Distributors’ involvement in the exchange. Speedy Distributors did want to have an EC initiative but they also joined the exchange in order to take a long-term wholesale agreement away from a competitor in order to gain Stop-N-Buy’s business. Stop-N-Buy wanted Speedy Distributors to participate because Speedy Distributors had cash to invest in the exchange; Speedy Distributor’s competitor was “cash strapped”. In addition, as the traditional middleman, Speedy Distributors had long-term business relationships with a number of retailers and suppliers. Stop-N-Buy could leverage these relationships in efforts to solicit other companies’ participation in the exchange. The importance of the middleman is evident in Burt’s structural hole theory (Burt, 1992; Burt, 1997).

The stated reason Speedy Distributors and Stop-N-Buy asked EC Technology Company to participate in the exchange was because they needed the technology resources of a company like EC Technology Company. EC Technology Company’s stated reason for participating was to gain more exposure in the food segment of the marketplace. My main informant explained another influence on why EC Technology Company was asked to participate: “…the EC Technology Company sign up should lead to a domino effect”. This concept is in line with work in institutional theory (DiMaggio, 1983; Meyer, 1977; Tolbert, 1988; Tolbert, 1996; Zucker, 1987; Zucker, 1989).

We Make It Manufacturers explained that they got involved in the exchange for an “opportunity to use an Internet-based platform to improve communication with retailers, to make our organization more efficient and to get a direct connection to food retailers that will enable us to better meet the information needs of these business partners”(Undisclosed, ). My main informant explained that We Make It Manufacturers’ got involved in the exchange because Speedy Distributor’s Chief Executive Officer (CEO) asked We Make It Manufacturers to participate. Speedy Distributors has been We Make It Manufacturer’s largest customer for decades and We Make It Manufacturers wanted to grant this request in order to maintain a positive relationship with their largest customer. This action is in-line with previous work in interorganizational relationships (Astley & Fombrun, 1983; Auster, 1994; Benson, 1975; Galaskiewicz, 1985; Miner, 1990; Oliver, 1990; Powell, 1990; Powell, 1994; Whetten, 1981; Zeitz, 1980) and social capital (Burt, 1997; Coleman, 1988).

My informant explained some of the reasons the exchange wanted to get We Make It Manufacturers involved as:

- "the involvement of a big backer like We Make It Manufacturers will lend credibility to the project";
- "the inclusion of a manufacturer will show that the exchange is a collaboration of an entire industry"; and
- "We Make It Manufacturers has cash to invest in the exchange".

The first two reasons again support previous work in institutional theory (DiMaggio, 1983; Meyer, 1977; Tolbert, 1988; Tolbert, 1996; Zucker, 1987; Zucker, 1989).

**Design Process**

This section discusses how the exchange is moving from ideals on paper to a working system. In critically reviewing my field notes, I have noticed no mention of input from the food store clerks, who would actually be using the system designed to control how they perform their job.

A legal agreement signed by each of the four organizations involved in the exchange is facilitating the development of the actual working prototype. This legal agreement requires that each organization donate a specified dollar amount in cash and in intellectual property in order to make the exchange a reality. The legal agreement has created a separate organization for the management of the exchange, with each of the four current partnering organizations holding board seats. As part of the intellectual property donation, each organization is responsible for donating their particular expertise to the design of the exchange’s working prototype.

Stop-N-Buy has contributed an actual working system that is being used as the exchange’s starting point. This system was developed several years before the exchange was developed and consists of the control portion of the exchange discussed earlier. Speedy Distributors contributed the expertise of several white-collar employees from the information systems, merchandising, and sales departments of their corporate office. Because the exchange is trying to appeal to all of the food stores in the industry, Speedy Distributor’s national sales manager was on special assignment at the exchange’s corporate office for four months, providing insights to the system designers into how business is done in the various food store chains. These insights were critical to the design of the system because most Stop-N-Buy employees have lifetime experience with Stop-N-Buy and are unaware of how business is done in their competitor’s stores. In addition, because of the competitive nature of the food store industry, the competitors would be unwilling to discuss business practices with Stop-N-Buy. In addition, as the only distributor involved in
the development of the exchange. Speedy Distributors also provided insight into how the distribution portion of the exchange would be designed.

EC Technology Company contributed their technology and related technical expertise.

We Make It Manufacturer’s contribution to the design of the exchange’s working prototype is input regarding the sales and distribution of a line of highly regulated products. We Make It Manufacturers is one of many manufacturers of this line of extremely regulated products and they are working with the designer’s of the exchange to ensure that the exchange incorporates current legal standards regarding the handling of these products. The field note excerpt illustrates the reasons behind We Make It Manufacturer’s role in the design of this aspect of the exchange.

“We are concerned about how the marketing and distribution of product X is going to be handled on the exchange. We want to be the people writing the bylaws for that issue. Since the exchange is open to all product X manufacturers, we are concerned that some of our competitors are not as ethical in their business practices and we do not want to be involved in unethical business practices. We’re not asking to dictate how product X is handled on the exchange but we do want to be a contributor to the exchange’s code of conduct regarding product X.”

We Make It Manufacturers has dedicated the expertise of their legal counsel and assigned several management interns to spend eight months at the exchange’s corporate office in order to provide their company’s insight into the project.

Conclusion

By taking a critical perspective (Calhoun, 1995; Mumby, 2001; Ngwenyama et al., 1997a; Ngwenyama et al., 1997b; Orlikowski et al., 1991) and delving past standard explanations, this ethnography sheds light on three dimensions of an EC project: how the ideal for the project originated; what influenced each of the four organization to join the project; and how the exchange is being designed. First, this ethnography reflected the emancipation of my main informant’s economic understanding of the development of the exchange as her reflections lead her to explicate other practical consideration affecting the exchange’s development. These include the useful life of technology, the need to share technology costs, the pressure from storeowners, and the desire to get into the EC game. Second, this ethnography delved past surface explanations to understand why the four founding organizations joined the exchange. While yes, these organizations did get involved because “it was an excellent opportunity to use an Internet based platform to improve communication and to make their organizations more efficient” (Undisclosed, ); this ethnography showed that factors not commonly spoken of also influenced the organizations’ involvement in the exchange. Long-term personal and business relationships, favors, competitive positioning, power, and the desire to “not be left behind in the EC game” all influenced the organization’s decisions to participate in the exchange. Finally, this ethnography showed how the exchange is moving from ideals on paper to a fully functional system.

This research paper showed the emancipation of an IT practitioner from their predominant economic understandings of IT project initiation (Williamson, 1979; Williamson, 1982; Williamson, 1985; Williamson, 1994; Williamson & Ouchi, 1981) by showing that organization joined this particular B2B EC exchange for a variety of reasons other than economic ones. This paper showed that organizations in this case joined the exchange partly because they “wanted to get into the EC game”. From a theoretical standpoint, this explanation shows that institutional theory (DiMaggio, 1983; Meyer, 1977) may be useful in the study of B2B EC project initiation. From a practical standpoint, this makes organizations aware that quantified and rationally analyzed project justification calculations may be finessed to support a decision made based on the desire to do what everyone else is doing.

This ethnography also shows the role of power (Hickson, 1974; Hickson et al., 1981; Mumby, 2001; Pettigrew, 1973; Pfeffer, 1981; Salancik et al., 1977) in IT project initiation, by showing the role power relations played (retailer over distributor, distributor over manufacturer) in organizational decision to join the exchange. The project also shows the role of unobtrusive power in the design of this B2B EC system, by showing how a large organization is using the Internet and EC to increase its power over food store clerks working in its stores. For researchers, these findings challenge the status quo since power is an under researched area in North American organizational research (Mizruchi, 1999). These findings ask that the designers of IT systems to consider the effects of the system owner’s specifications on the employees that will be using the system.
References


Benson "The interorganizational network as a political economy.," Administrative Science Quarterly (20), 1975, pp. 229-249.


Emerson Contemporary Field Research, Waveland Press, Prospect Heights, IL., 1983.


Miner "Interorganizational linkages and population dynamics: Buffering and transformation shields," Administrative Science Quarterly (35), 1990, pp. 689-713.


Salancik and Pfeffer "Who gets power--and how they hold on to it." Organizational Dynamics (Winter), 1977, pp. 3-21.


Undisclosed Trade Press Publication Undisclosed because of potential confidentiality issues.


