Building Consumer Trust

An Online Perspective

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“Trust is good, but control is better.”

-------- Vladimir Lenin.
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Abstract

The Internet and all other electronic means have changed our way of doing business, and many of our businesses and transactions today are conducted online. Yet consumers marketers fight for building trust between one other. Other than being able to touch and “test” products physically, it is now possible to have all types of contacts and exchanges via the Internet. Therefore, consumer trust in online environment is of great importance, and understanding it is the aim of this research. The specific purpose of this thesis is to gain a better understanding on how to build and maintain consumer trust in the online environment. To reach this purpose, three research questions (RQ) based on previous theories emerged and resulted in a conceptual framework. Using a qualitative methodological approach, data was collected via interactive observation for each of three case studies. Comparing the empirical data with the conceptual framework, findings and conclusions emerged. The online environment and the quality and usability of websites helps the browser and consumer to be attracted and accessible to the information and the product and services available online. Transaction reliability and security are the most important to consider before a consumer decides to purchase. Customer service helps to make these decisions happen and also to maintain the step-by-step process of building trust.
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1 Introduction

This chapter helps the reader to be introduced with the background of the study focusing on building online customer trust, the problem discussions, the purpose and specific research questions.

1.1 Background

The web is the most selfish environment in the world, says Daniel Rosenweig, chief operating officer of Yahoo ‘People want to use the internet whenever they want, how they want and for whatever they want’. It is not price transparency that makes internet customers so powerful, it is also the way the net makes it easy for them to be fickle. If they do not like a website, they swiftly move on (The Economist, 2004).

Two factors that significantly contribute to the success of e-business are the trust people place on the online business and how secure they feel in transacting business on the internet. Trust is something that has to be earned over a period of time. In the real world, trust is gained both by observing physical structure of the organisation as well as by the third party recommendations. Trust brings in repeat business, an essential ingredient for success (Srinivasan, 2004).

Trust is one of many factors that contribute to e-business success. There are many ways to build trust. It is an ongoing process that never stops. Many of the trust builders that apply in the bricks-and-mortar (BAM) world apply to e-businesses as well (Srinivasan, 2004). It has been claimed that the development of trust depends on service provider characteristics. Customers from trusting beliefs based on the perceived competence, benevolence and integrity of the provider (Mayer et. al., 1995).

Trust can be defined as ‘the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustee, irrespective of the ability to monitor or control that other party’ (Mayer et. al., 1995). Trust embodies customer beliefs of actually receiving a promised service and a manifestation of consumers’ confidence in an exchange partner’s reliability and integrity (Morgan and Hunt, 1994). In order to use the service in the first place, consumers need to have some degree of trust in the provider’s willingness and ability to perform the desired task (Doney and Cannon, 1997).

The availability of goods and services with the click of a mouse is changing the global landscape, but your company’s success could very well come down to a single, old-fashioned value: trust. In the online world, companies can enjoy sustained [the best-known statement first derived from the report ‘our common future’ of world commission of environment and development (WCED,1987) ‘sustainability is defined as non-declining utility of a representative member of society for millennia into the future’(Pezzey, 1992, pp-323)] growth and stability, even competitive advantage [a competitive advantage exists when the firm is able to deliver the same benefits as competitors but at a lower cost (cost advantage), or deliver benefits that exceed those of competing products (differentiation advantage). Thus, a competitive advantage enables the firm to create superior value for its customers and superior profits for itself (Competitive Advantage: Creating and Sustaining Superior
Performance by Michael E. Porter] if they are viewed in the global market place as trustworthy business partners and employers and worthy investments. Trust in the online world means having websites, organizations, services available to stakeholders when, where and how they want them. And trust requires business to act transparently in every interaction with customer (Mears et al., 2003).

Consumers expect their identity and personal information to remain confidential and in addition, they want to experience a comfort level in their dealings with marketer. Since the beginning of e-commerce, businesses have realized that they must respond to these concerns to develop repeat customers and a robust web business (Dayal et al., 1999).

As customers embrace e-commerce they have escalated expectations about service and support to enable them to shop online. Customer service applications in electronic commerce are more critical than in conventional sales, since customers and merchants do not meet face-to-face. A click of a mouse is enough for an online customer to select a new provider. Electronic commerce is exponentially increasing the availability of information, giving customers access to more knowledge of better quality and faster than before. A company that can respond to the needs of customers, accommodate their requests promptly and support their buying decisions creates value and wins customer patronage and loyalty (Singh et al., 2001).

Ho and Wu (1999) suggest that in electronic commerce all potential internet users are potential customers. For business to win this potential customer and to convert them into real one depends on effective customer relationship management. Online services such as, easy search of product and services, provisions of product specifications that reduce communication costs, secure electronic payment systems to complete transactions, updated product delivery information and quick responses to customers queries are important to win online customers and to make them keep coming back to the site for further purchases (Turban et al., 2000).

Archer and Gabauer (2000) emphasise that building and maintaining customer relationships are the key to success in e-commerce, which depends on maintaining effective customer service. In B2C e-commerce, (Singh et al., 2001) suggests that effective customer support and services are vital to encourage customers to shop online as it is a lonely experience, does not allow touch and feel and have a high degree of concern regarding security and privacy of information.

Trust is a part of a larger set of ‘three–dimensional benefits’ that customers are demanding. Customers are looking beyond functional benefits such as quality and price for process (better ways to research and buy) and relationships (trust and ongoing communications). As a result how companies present themselves and provide a rich set of 3-D benefits is just important as the goods and services they offer. Companies that create and nurture trust find that customers return to their sites repeatedly. CDNow, Amazon.com and Onsale generate well over half of their sales from site loyalties. Contrast this with a typical underperforming retail site where only a quarter of sales come from repeated buyers (Dayal et al., 1999).

Building trust that leads to satisfied customers is essential and complex for marketing executive. According to Dayal et al., (1999) there are six elements that combine to build a ‘trust pyramid’. The base of the pyramid shows the three core elements needed just to be in the game: secure technology, merchant legitimacy, and robust order fulfillment. Winning
marketers move well beyond the basics with more subtle trust builders that differentiate them from the also-rans: tone, consumer control, and collaboration. As the baseline level of trust and security rises, these points of distinction become more critical. Taken together the six elements of trust create the comfort and confidence needed to turn browsers and ordinary customers into online (See figure 1).

![Figure 1: The trust pyramid.](source: Dayal et. al., (1999), P. 65.)

*The six elements of the trust pyramid discussed below according to Dayal et. al., (1999).*

**State-of-the-art security:** The most reliable security measures on the sites should be used and communicate that we are doing so to consumers in language they understand. Shoppers at net market are assured of ‘guaranteed safe shopping’ with a no compromises promise. At net market, consumers can shop with confidence. We use the latest encryption technology, digital certificates, secure commerce servers and authentication to ensure that customers’ personal information is secure online.

**Merchant legitimacy:** Brands are important on the web. They help shoppers sort out their choices when they have a limited range of clues as to product quality and functionality. Familiar names with established records of performance go a long way toward building trust, as long as marketers continue to deliver that performance through their web ventures. If any company lacks recognizable consumer brand, three tactics can get it in the game.

♦ Sell branded products.
♦ Ally your product or service with an established brand.
♦ Encourage prospects to sample your services through low-risk trials and creative offers. E-trade lets prospective investors take part in contest without putting real money on the line.
**Fulfillment:** Great security and brands can only go so far; the next requirement of a trust building site is order fulfillment. Customers want to place orders and get merchandise efficiently and with minimal hassles. Many websites lose sales when buyers have to fight to complete a transaction. Nothing alienates a buyer more than when one entry mistake causes him/her to lose pages of entered information, get thrown offline, or find the computer frozen. Lack of clarity about actual cost is a big negative. Prospective buyers at some retail sites must slog through a lengthy registration process before discovering that sales taxes, shipping and handling charges greatly increase the total price of their purchase. The best practice is to explain all costs and have an infrastructure that gets the right product of the right buyer in a reasonable period. In practice, even the best companies will sometimes stumble in fulfillment.

**Tone and ambience:** Trust-building encompasses more than the technical aspects of a Web site. Consumers want to know that marketers will handle their personal information with sensitivity. Without ironclad confidentiality, consumers will never be forthcoming or move ahead with a value exchange. Leading marketers explain how they collect and handle customer information and post an easy-to-read privacy statement. Design and content are other critical elements. E-Commerce Trust, a January 1999 study by Cheskin Research and Studio Archetype/Sapient, points to the importance of ease of site navigation as one influence. A site's appearance also says a great deal about a marketer. Value America, a virtual retailer, stresses the importance of ‘white space’ and presents products in an uncluttered, friendly setting that shoppers find appealing. Drawing on the next wave of personalization technologies, marketers will be able to customize the online store ambience for each consumer. For example, if it was sensed that on a music site the visitor was a classical music aficionado, the audio selection and visual merchandising would reflect that sensibility; and heavy-metal fans would enjoy a more raucous presentation. Marketers set the right tone with customers when they are straight about all aspects of the relationship, such as how they deliver services.

**Control:** Consumers learn to trust a marketer when they know that they, not the marketer, control access to personal information. Marketers who ask permission to get personal details are taking the smart approach. Some companies, for example, discuss the benefits provided by cookies on a user's hard drive (the cookie ensures that preferred settings appear without the customer logging in each time), then asks the user for permission to place a cookie. More broadly, consumers like to feel that they are in control of the buying process.

**Collaboration:** A site nurtures trust when it encourages its customers to contact and inform each other about the company's product and service offering. A Yankelovich Partners survey reveals that consumers consider other users of product to be the most trusted source of advice when considering a purchase of that product. Thus, chat groups let consumers query each other about their purchases and experiences. Amazon.com customers, for example, have posted hundreds of wildly divergent opinions about a single book.

The above discussions about the ‘trust pyramid’ show that trust is built methodically through a step-by-step process in which the consumer and marketer exchange value. Dayal et.al., (1999) mentioned that each time the consumer volunteers some personal information the marketer should be ready to reward the consumer with personalised services and richer experiences. The mutual give and take eventually leads to advanced trust based collaboration. And here comes the question of a most interactive customer service and the way of making customers trusted on online shopping by this service. Doney and Cannon (1997) believe that the most salient source of trust in a retail setting is the salesperson, where consumer’s trust is
dependent on the salesperson’s expertise, likeability and similarity to the customer and Lohse and Spiller (1998) added, on online shopping this physical salesperson is replaced by help buttons and search feature, thus removing the basis of consumer trust in the shopping experience.

Consumers cannot physically check the quality of the product or monitor the safety and security of sending sensitive personal and financial information while shopping on the internet (Lee and Turban, 2001). And that’s why trust has an important moderating effect on the relationship between consumers’ attitude towards internet shopping and intention to shop online (Monsuwe et al., 2004). And Mark Bard (2002) strongly believes that benefits abound if we can move customer service online.

1.2 Problem Discussion

If companies are to enjoy long-term success in the online market place, they must effectively manage the complex, multidimensional process of building online consumer trust (Allen C. Johnston and Merrill Warkentin, 2004). Trust exists in many forms, across multiple domains, and at variety of levels (McKnight et al., 2002).

Trust, according to Fukuyama (1995), is the lubricant of trade and, this way, determines the wealth of nations. The relative paucity of regulations and customs on the internet makes consumer familiarity and trust especially important in the case of e-commerce. Yet the lack of an interpersonal exchange and the one-time nature of the typical business transaction on the internet make this kind of consumer trust unique, because trust relates to the other people and this nourished through interactions with them (Gefen & Straub, 2004). Trust is an interpersonal determinant of behaviour that deals with beliefs about the integrity, benevolence, ability and predictability of other people (Mayer et al., 1995). However, in contrast to face-to-face commerce and other applications of trust in the literature, there are typically no interpersonal interactions in e-commerce neither direct nor implied. Such interactions, or even cues relating to them, are notably missing from e-commerce website (Reichheld & Scheffler, 2000).

According to Srinivasan (2004) trust is not easy to measure. It is developed over a period of time. People trust a business based on their own past experiences as well as by the third party recommendations. In the world of online commerce the factors that significantly contribute for enhancing transaction, trust is: a) Easy access to description of products and services, b) Ease of placing orders, c) Order confirmation, d) Order tracking and e) Post-sales service.

Some contributing factors for gaining customer trust are- appeal of the website, product or service offerings, branding, quality of service and trusted seals (Srinivasan, 2004). Higher perceived social presence may also increase trust through its effect on increased electronic communication, as in e-mail interactions (Gefen & Straub, 1997).

A company that neglects its website may be committing commercial suicide. A website is increasingly becoming the gateway to a company's brand, products and services even if the firm does not sell online. A useless website suggests a useless company, and a rival is only a mouse-click away. If they do not like a website, they swiftly move on. But even the coolest website will be lost in cyberspace if people cannot find it, so companies have to ensure that they appear high up in internet search results (The Economist, 2004).
According Yang et al., (2003), many studies simply dealt with a technical assessment of the basic contents and hypertext structures of websites (c.f. Perry and Bodkin, 2000). Other research concentrated on principles developed from human factors research in computer interface design. For example, (c.f. Lu and Yeung, 1998) contend that human-computer interface design factors are applicable to commercial web applications. A growing body of research supports this perspective (c.f. Shneiderman, 1996). This ethnographic approach places the user in the forefront of the website design process, taking into account the way business is conducted and the way people communicate in the target society when developing the interface design.

Another way to build a dotcom's image is to provide consumers with an interactive, fun, experience-oriented or experiential website. Elements that can make a dotcom's website experiential include graphics, 3-D images and animation, video and audio capabilities. In addition, chat rooms and real-time customer service applications (which link site visitors directly to other visitors, or with company support personnel, respectively) are also being used to make dot.com sites more interactive. Li et al., (1999) notes that dotcoms are increasingly incorporating such applications in their websites, in order to make consumers' online shopping experience more similar to that of an offline store.

Yang et al., (2003) quite rightly points out that any business engaged in e-commerce should strive for competitive advantage in their websites by designing them around the needs, wants and preferences of targeted customers and prospects. Those customers want easy-to-navigate sites, guarantees of privacy and security, good customer support and some degree of reassurance as to what they're buying. Yang et al., (2003) conclude - a very significant point this too that the crucial issue is not (as many businesses online and offline seem to think) price but trust. It does not matter how low our prices or how good our product quality - if the customers do not trust our offer they will not buy.

Communication is a necessary ingredient of constructive interaction. When dealing with consumer queries and grievances they are even an expected aspect of any service or product. Hence, in accordance with Luhmann’s (1979) observation that trust is increased when the trusted party shows behaviour or other indications in accordance with one’s expectations, the perception that the e-vendor is embodying a high degree of social presence in the website should increase consumer trust, to the degree that such indications are expected.

Lightner (2004) states, B2C websites allow companies to present their unique advantages, as long as they provide the necessary customer services. While many factors determine the success or failure of an e-commerce website, the level of customer service provided may serve as an indication of user satisfaction with the transaction orientation of a website. What factors in the online environment really should we take in our main consideration and how online customer services help to build trust step-by-step. Singh (2002) says that it is also necessary for customers to have trust in electronic commerce infrastructure and environment. E-services that provide detailed information on trust and the security system implemented by companies for secure transactions are important attributes in B2C e-commerce. According to Lightner (2004) the rewards of B2C e-commerce are realized partially through well-designed websites, since they act as the primary contact with customers.

The above discussions about consumer trust in online buying and the understanding of online trust issues take us to a longer process of interactions between the buyer and seller where customer service is an important part for a trust building process. Lightner (2004) added that
there are some factors for consumers trust in online buying when they plan to buy, there are also more factors and matter of interactions when they are on the buying process in online and after buying online.

1.3 Purpose

The purpose of this study is to provide a better understanding on how to build online consumer trust.

1.4 Research Questions

The trust pyramid (described at page 3) helps us to develop the research questions where a comfortable and confident web environment and the customer-marketer interactions both make the base of trust and it’s an important exchange value builds through a step-by-step process. The following research questions have thus emerged:

**RQ-1.** How can the online environment (website contents, design, etc.) be described?

**RQ-2.** How is customer service used strategically in online environment?

**RQ-3.** How can the process of building trust be described?
2 Literature Review

The studies related to the problem area and also specific literature reviews related to the research questions (RQ) will be delivered in this chapter. The online environment (such as content of the websites, designs of the websites etc.) and how customer service is used online and also the process of building trust are explained. These three parts are focused mainly in these theories. Since the ‘Trust Pyramid’ in this study (page 3) shows the peak as trust point through a process combining security, fulfilment, technical aspects and collaboration & interactions, we then intend to find the outcomes on which process builds consumer trust and how. Here we have provided some related literature below on the basis of the aim of our study and research questions.

2.1 The Online Environment

The importance to the global economy of commerce conducted over the internet is no longer in doubt (Henry et. al., 1999). Determining how to create commercial online environments that engage consumers so that important marketing objectives, such as extended visit durations, repeat visits, and online purchase objectives may be achieved, are critical marketing tasks (Novak et.al., 2000). While customers visit online they are connected to a vast information store worldwide and Geissler (2001) suggests that the related environment like internet speed, quality and comfortability of the web pages, design and availability of websites, security of information provided, simplicity of getting in touch with the marketers and interaction between website visitor and information provider or marketer are very important things. The content and design of the web page should be well laid-out and functional. Navigational tools, such as ‘links’ and ‘frames’, are seen as essential. Some designers in a survey conducted by Geissler (2001) indicate that users do not like to scroll down a home page and much prefers hyperlinks to separate pages. They feel that consumers may become lost or disinterested with too much information upfront. Consequently, many designers recommend limiting the size of the home page to one page or screen. Some graphics are also seen as helpful in attracting consumers' attention, but they must be few, fast loading, and professional.

2.1.1 Web Content

Content analysis of websites has been used in previous research to examine the degree of interactivity within websites (Ghose and Dou, 1998). In the physical marketplace (outside cyberspace), most firms use a variety of marketing communication activities to communicate with customers and stakeholders. While the potential is evident, it is not clear whether or not companies are taking full advantage of that potential by utilizing a broad, rather than narrow, range of marketing communications on web sites. Some firms may not utilize the full range of marketing communications on their web sites because they perceive that high financial and human resource investments are required to build and maintain effective corporate websites (Budman, 1998). With respect to web site specific characteristics, Perry and Bodkin (2000) found that search capabilities and site maps were used most often. This suggests that companies do indeed recognize the possibility of information overload and utilize web-specific capabilities to minimize the negative effects. The use of search capabilities and site maps would also indicate that firm’s corporate web site will attract multiple audiences. Thus, such search and map functions allow the firm to better communicate with multiple audiences (customers, employees, and investors). However, many firms are not utilizing web specific
mechanisms to help website visitors navigate their sites. There are more firms that have their corporate logo than a search capability on their website. This disparity may signal companies that are not particularly attuned to the unique problems and opportunities associated with website visitors. It may suggest that many companies have only a naive appreciation for the information requirements of customers (or other website visitors) and develop a web presence simply because they know other companies have them.

**Human-computer interface design:** Many studies simply dealt with a technical assessment of the basic contents and hypertext structures of websites (Perry and Bodkin, 2000). Other research concentrated on principles developed from human factors research in computer interface design. For example, Lu and Yeung (1998) contend that human-computer interface design factors are applicable to commercial web applications. A growing body of research supports this perspective (Shneiderman, 1996). This ethnographic approach places the user in the forefront of the website design process, taking into account the way business is conducted and the way people communicate in the target society when developing the interface design.

**Stickiness:** The Internet involves quality of design, quality of information, quality of transaction and security. Attracting customers to the site is only the first stage; the site has also to be sticky. A sticky site is one that keeps people there and more importanty makes them return. The key factors in stickiness are quality and usability (Crockett, 2000). Purchasers of services have previously judged the quality of the (intangible) service by the quality of the tangible elements; for example, in a restaurant, the service is judged by the decor, the staff uniforms and the cleanliness of the toilets. If this behaviour was repeated then potential customers will judge the quality of the goods and services offered on the Internet by the quality of the web site. Furthermore, the computer monitor is now the new customer interface. Every time a potential customer logs on to the web site it is a moment-of-truth (MOT) for the organisation (Gronroos, 1988).

**Sensory stimuli:** Research has repeatedly demonstrated that the sensory shopping experience contributes to making the sale and building customer relationships for the brick-and-mortar retailer. Further, there is evidence that sensory stimuli such as music, colour and lighting can influence the amount of time and money that a shopper spends in a retail establishment (Herrington and Louis, 1994). For the e-retailer, the sensory shopping experience must be played out on the template of the web page (Rosen et. al., 2002). Thus far, two of the most common ways used to measure website effectiveness are the number of eyeballs or click-through. These measures merely capture how effective the firm's strategy is in regards to driving traffic to the site. To measure how effective a site is in terms of developing an appropriate e-retail sensory environment requires measuring the attitude toward the site design and intention to revisit. In the case of a site designed for retail sales, purchases would be an additional measure (ibid).

**Cognitive landscape:** One way in which human cope with processing information is through the use of cognitive maps. Using a cognitive or mental map provides us with a means of sorting information from our environment. Cognitive maps are an accumulation or summary of experiences. Humans draw on these maps to make their way through an environment. These maps influence ‘how the environment feels to that person, what is noticed, what is ignored’ (Kaplan and Kaplan, 1982).
According to Rosen et. al., (2002), having a cognitive map, however, is not enough. Human must be motivated to use and extend these maps through environments designed to take advantage of these cognitive maps. People appreciate and are motivated to use information, which helps them expand previous knowledge contained in their cognitive maps. On the other hand, they have trouble understanding and are not motivated to use information, which is not connected to the maps they already have. Further, Kaplan et. al., (1998) believes providing too much information creates a barrier to engaging the recipient's internal map. Cognitive maps allow someone to go where he/she has never been before. By recalling previous experiences stored in the cognitive maps, an individual gains a level of confidence in his/her ability to find his/her way.

2.1.2 Website Design

Website design presents a new challenge for marketers conversant in print media. Unfortunately, many companies have taken what they developed for other media (magazine advertisements, catalogues, etc.) and applied it directly to their website. Others involved in web page design believe that the theories that have evolved for effective use of print media do not transfer well to the web. For example, when designing ads for a newspaper, one has a large canvas to work with which lends itself to striking, intricate designs. Yet, newspaper layout does not transfer to the web as a computer screen cannot handle the same volume of information effectively (Nielsen, 1999). Consequently, simplicity of design has become the mantra of some web design gurus. Many elements of design and graphic art can be used to convey content on the web. The choices are truly endless. Elements of space, use of images, size of images, use of animation and/or audio, number of words per line, colour and size of characters are among just a few of these factors. Additionally, the work of content design does not stop with selecting the appropriate elements for the particular audience. Content design also involves deciding on the placement of those elements to facilitate their use. The Preference Framework of Kaplan et.al., (1998) provides a means of sorting out these options and designing an effective web landscape (Rosen et al., 2002).

Download speed: Designing an overly complex website or an overly simple site can deter or limit interactivity. Download speed remains a key concern of designers, although many see significant increases in bandwidth and Internet speed in the near future. For the time being, designers warn against huge downloads, slow graphics, too much text, and having a site that is too high-tech (Geissler, 2001).

Navigation: An interesting and emerging interactivity concept involves the use of controlled navigation. The idea is to provide an incentive for consumers to navigate through as much of the website as possible. One approach is to offer something free somewhere else (besides the home page) on the web site. Another approach is to develop contests for prizes to solve puzzles from information found on a site. The basic premise is that the more information consumers gather from a web site and the more comfortable they become with it, the more likely they are to eventually purchase a product or service online. Ordering online should be simple, with only a few steps between a purchase decision and an order (Geissler, 2001).

What’s new: A website should provide new information to consumers on a regular basis. Rather than updating the entire site, many designers construct a ‘What’s New’ page or a ‘Coming Attractions’ area. For a company to maintain a relationship with an online customer,
the customer must receive something in return. Other than updated information, customers seek novel experiences, according to designers (ibid).

**Feedback:** Designers often recommend that companies attempt to gather personal information, such as e-mail addresses, street addresses, phone numbers, and fax numbers, from consumers to establish and maintain direct contact with them. Not only the web, but also traditional media, can be used to provide information and updates to consumers and to gather valuable feedback (ibid). Geissler’s (2001) model of designing and maintaining an effective website shown below (see figure 2).

*Figure 2:* A model for designing and maintaining an effective website to facilitate online customer relationships.

**Key marketing approaches:** Do the marketing goals relate to the design of a website, if so, how? All of the respondents in Geissler’s (2001) research survey feel that a client's marketing goals do and should influence web site design. For example, many clients expect the company image should resonate throughout the site. The central message or selling proposition should be clearly communicated, and it should be consistent with other media, as part of an integrated marketing communications program. In many cases, the site design should facilitate the purchasing process and reassure customers that ordering via the web site is secure and reliable. Effective website design ensures customer service before, during, and after a sale. Several key marketing approaches influence both website design and the customer conversion process. Establishing and maintaining customer relationships should be the overriding objective of online marketing efforts. Segmentation, targeting, and positioning are just as important in the web environment as they are in other medium (Geissler, 2001).
1. **Segmenting, Targeting and Positioning:** Segmenting, targeting, and positioning (STP marketing) are key activities that guide the development of relationship marketing strategy on the web, as in other media. STP marketing provides a sound basis for developing effective web communications. A target segment is a subgroup of the larger market chosen as the focal point for the marketing program (e.g. advertising). To pursue the target segment(s), a firm organizes its marketing and communications efforts around a coherent positioning strategy, which essentially represents a distinct and valued image of the product or service in the consumer's mind. Effective positioning strategies are based on organizational commitments to create substantive value for the target consumer. Marketers generally agree that a positioning strategy should be consistent internally and over time, and it should be simple and distinctive. Segmentation, targeting, and positioning are critical to the site's success. Many designers feel that much consumer behaviour on the web is goal-directed. That is, consumers are actively looking for information about specific products or services. Knowing firm's customer (i.e. developing a customer profile) is imperative in designing an effective website. As with other communications media, marketers should target online customer segments and not try to accommodate everyone (ibid).

2. **Relationship Marketing:** The role of the web in relationship marketing was more implicit than explicit, during the course of the interviews. While the IMC (integrated marketing communications) and STP (segmenting, targeting, and positioning) marketing approaches were clearly stated, it seems understood that relationship marketing is closely tied to these strategies. For example, the notion of gathering customer feedback implies a desire to satisfy customers and to promote a long-term relationship. Providing customers with ways to contact the company (e.g. e-mail addresses, toll-free phone numbers) promotes interactivity. Reassuring customers that ordering via a website is secure and reliable inspires trust, which is a crucial aspect of any relationship (ibid).

3. **Integrated Marketing Communications:** Integrated marketing communications (IMC) is a relatively new approach to help manage relationship building. It is an attempt to look at the communications effort from the consumer's perspective. IMC involves coordinating distinct parts of a company's communication efforts (i.e. advertising, public relations, sales promotion, purchasing, employee communication, and so forth) to generate a flow of information from indistinguishable sources. The overall objectives of IMC are to provide a clear and consistent message, and maximum communications impact. Several factors, such as fragmentation of media, consumer empowerment, and database technology, have contributed to the rising prominence of IMC. Traditional and new media options are expanding rapidly; interactive media represent yet another communications option. Coordinating web marketing efforts with other marketing communication will help prevent customer confusion, by ensuring that a consistent message and positioning is communicated. Thus, most websites realize their full marketing potential when they are viewed as part of an IMC program designed to facilitate long-term relationships with target consumers (ibid).

**Web site design considerations:** The design and implementation of effective websites involves the creative use of both familiar and relatively new marketing approaches. Most designers understand that the ‘build it and they will come’ approach is not valid in the increasingly competitive arena of web marketing. To be effective, the website must be designed with the target audience as the foremost consideration. Website designers must balance design considerations and capabilities with client objectives and with impatient consumers who possess various levels of technological sophistication. They must also
communicate the right amount of information to target consumers, including the essentials - who we are, what we offer, what is inside, and how to contact us (ibid).

1. **Client relations:** Respondents were asked in the Geissler’s (2001) research survey that thinking about your clients, what is the most common objective for having a website? The most common objective is to generate more business. Respondents claim that many of their clients see the web as another way to conduct business and to reach current and prospective customers. Along similar lines, designers commented that some of their clients set up web sites to provide free information to current and prospective customers. The website serves as an information clearinghouse. Some clients want designers to organize their websites in a format similar to a company brochure. Of course, that ‘brochure’ is always available with no waiting. Other clients seem to understand the importance of proactively communicating an image and message to customers. Some clients are interested in incorporating the web into their integrated marketing communications.

2. **Impatient consumer:** Designers frequently commented that online consumers are impatient. They generally feel that capturing the web user's attention is increasingly important. Web designers tend to use their own rules-of-thumb concerning the length of time they have to grab a consumer's attention, ranging from five seconds to 30 seconds. The home page should be clean, clear, relatively simple, and fast loading. It should be brief and to the point, answered the designers commented that some users are not sure whether they are even in the right place when they enter some web sites (Geissler, 2001).

3. **Homepage essentials:** A home page is viewed by designers as too simple if it does not include the essentials. For example, a home page with only the company logo or slogan may be too simple. On the other hand, including more than the essentials may make the home page too complex. An often-cited example is including too many graphics or several large graphics. A home page is thought to increase in complexity when it contains anything beyond the essentials, described as information communicating ‘who you are, what you offer, and what's inside’. Company contact information or a separate contact page (indicated by an icon) is also seen as essential. The home page should quickly answer the question ‘why should I be here?’ Designers feel that a web home page should be balanced and self-contained. They strive to strike a balance between providing too much information and not enough (ibid).

4. **Designer restraint:** Designers indicate that they must have some restraint in using the latest techniques in website design. One cannot assume that users have the most recent internet browser or computer system, despite their availability. This is especially true when one considers the increasingly rapid rate of change in technology, as one designer pointed out. Today's new and improved speedy computer system is tomorrow's antiquated technology. Unfortunately, trying to anticipate who is using what system is a guessing game to some extent. Nevertheless, many designers employ the KISS (Keep It Simple, Stupid) principle. They often refer to the lowest common denominator, i.e. less sophisticated systems used by many consumers (ibid).

**Online Customer conversion process:** A model of the conversion process (Berthon, 1996) on the web illustrates the flow of marketing communications on the web and emphasizes close, long-term, interactive relationships. The model illustrates a six-stage process from awareness of a given web site to repeat purchases online. Visitors may be converted to purchasers or customers by ensuring that it is easy for the consumer to establish a dialogue with the company. The company must respond quickly to consumer inquiries and
in a professional manner. Ordering should be simple and secure for consumers. A company should monitor customer satisfaction. Gathering and responding to customer feedback are critical communication activities when attempting to convert a purchaser to a repeat customer, thus establishing an online relationship (Berthon et. al., 1996).

1. Creating awareness: To make consumers aware of a website, which other media should we recommend using and why? Without exception, designers agree in Geissler’s (2001) research survey that any materials that include the company name should also include the website address to help facilitate consumer awareness. Specific printed materials include items such as brochures, letterhead, business cards, and print ads. Non-print advertising, such as television and radio ads, should also incorporate the web address.

2. Locating web sites: How do you help consumers locate a specific website? One designer commented that the web is like a large shopping mall. Consumers need a directory of stores or sites to find their way and to not waste their time. They need a map showing them that we are here. The most frequently cited ways that designers help consumers locate a specific website are via search engines; easily guessed descriptive domain names; and key words to aid searches. Designers seem to agree that the top ten search engines are used by around 90 percent of web users. They emphasize the importance of understanding how each search engine works, because each is different. In addition to key words, creative ways to aid search engine use include using meta-tags that cause documents to ‘pop up’.

3. Learning to interact: How do we attempt to convert hits (i.e. landing on a site) into visits to a web site? What have we learned about interactivity? Many designers in Geissler’s (2001) research survey include forms requesting personal information to help establish a customer database and to facilitate relationship marketing online. They seem genuinely surprised at how well this works. To encourage participation, consumers are often offered something free.

4. Controlling navigation: Providing consumers with an easy means of navigating (e.g. hyperlinks, frames) through a website is viewed as critical for facilitating interactivity. Consumers should be able to move quickly and efficiently within a site. Contact information or an e-mail link provides a vital link to the company. Some designers consider including ways for customers to contact other customers (e.g. via chat rooms) to share information and personal experiences. Of course, word-of-mouth can be beneficial to a company when consumers share positive experiences; it can also be detrimental if negative in tone.

5. Using freshness dating: The key to retaining online customers is to keep the web site fresh, updated, and dynamic. Similar to the freshness-dating concept employed by manufacturers of various packaged goods (e.g. milk and, more recently, beer), web sites often include a date when it was designed or last updated. A website should provide new information to consumers on a regular basis. Rather than updating the entire site, many designers construct a ‘What's New’ page. For a company to maintain a relationship with an online customer, the customer must receive something in return.

6. Pushing and pulling: Another interesting concept that emerged from the interview data is the attempt to use the web, essentially a pull medium, as part of a larger, push marketing strategy. Consumers are often already interested in receiving company or product information when they visit a web site. In a sense, they become pre-qualified prospects by their own volition. They open themselves to a potential relationship with the savvy marketer.
**Website design strategy:** Wen et. al., (2001) described a website design strategy where web design has evolved from static hypertext publishing in the early days to dynamic multimedia, web database application servers. More importantly, new business models that bring savings, revenues, and customer relationships are being incorporated into commercial website design. There are two generic web site design strategies:

1. Informational/communicational strategy and
2. On-line/transactional strategy summarized in Table 1.

**Table 1:** Website design strategy.

<table>
<thead>
<tr>
<th>Website design</th>
<th>Definition / characteristics</th>
<th>Promotion measures/ ways</th>
<th>Merits</th>
</tr>
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</table>
| Informational / communication design | This approach is for companies to use the web as a supplement to traditional marketing, delivering additional benefits to customers and building relationships with them. | 1. Putting companies’ catalog online.  
2. Building broad awareness and image.  
3. Using the web as a cost effective way to augment their core products with related information and service function.  
4. Obtaining cost savings from automating routine customer services. | 1. Providing large quantities of information to customers.  
2. Giving a company an instant global presence and attracting people to one’s ad, some of them are not company’s target market but potentially will be.  
3. Opening a new communication channel allowing a company to develop further relationships with customers.  
4. All at a reasonable cost. |
| Online/transactional design   | This approach is for companies to use the web to construct ‘virtual business’ – independent, profitable ventures that exist only on the internet. | 1. Creating a retail presence larger than any physical store could.  
2. Creating a virtual business providing extra information in a form competitor can not imitate.  
3. Creating a virtual business that takes a specialty product or collectible and sells it worldwide.  
4. Creating a virtual business that uses the internet to produce superior economic benefits to customers that competitors can not imitate.  
5. Creating a virtual business providing convenience to customers that competitors can not match. | 1. Providing a larger or more specialized selection of products than competitors can offer.  
2. Providing higher quality and higher quantity information, more economic benefits, and more convenience than competitors can offer.  
3. Providing a sense of community for customers. |

1. **Informational/communicational strategy:** In the informational / communicational strategy, the web is used to support but not to replace a company's main business activities. Companies do not limit themselves to just marketing on the web. As a matter of fact, they look at other traditional media of advertising and marketing study in order to meet their business goals and marketing objectives. Looking at web marketing as another tool in the company's marketing arsenal (c.f., Clark, 1997), the informational/communicational design is the most common use of web marketing today. Liu et al. (1997) reports that 93% of Fortune 500 companies have publicly accessible sites, but fewer than 26% of those sites support transactions. On the other hand, there is no doubt that informational/communicational design on the web can also produce significant sales in other areas of business. For example, Insight Direct, a discount computer cataloger selling mostly to business, generates only 10 per cent of its sales from its on-line catalog, but more than 75 per cent of its new customers come from the site.

2. **On-line/transactional strategy:** The on-line/transactional strategy invariably provides an electronic catalog of products for sale. Visitors can browse through the catalog and order products on-line. Although the informational/communicational design often provides an electronic catalog as well as ordering information (e.g. by phone, fax, or e-mail), it does not support on-line transaction. Without on-line ordering web database capability, it hardly exploits the potential of the Web as an interactive medium.

Griffith and Kramp (1998) indicated that the ability to enhance a company's overall sales was a significant decision factor to establish a website. Although there are still some hidden obstacles (e.g. transaction security), it seems that most companies are likely to benefit directly from marketing on the web, especially for small and medium-sized enterprises. In fact, there have been a lot of successful on-line/transactional designs, such as Amazon.com and Virtual Vineyards. The number of successful enterprises is growing.

**E-commerce Web site design models:** There is no doubt stated by Wen et al. (2001), that many web design models exist on the Internet and new models are increasing expeditiously. EC (electronic commerce) is not just about doing business over the internet, it is about changing the way companies do business. It is about creating new business models while transforming traditional ones. After visiting many web sites, a total of 12 website design models for EC were found, shown in Figure-3 next page. The first four models that related to the informational / communicational design are:

1. Brand awareness and image building model
2. Cost saving model
3. Promotion model and
4. Info-mediary model.

**Brand awareness and image building model:** Web sites that apply this model provide detailed, rational information about the firm and its offerings. They may also serve as a signal to current and prospective customers and competitors that the firm is on the cutting edge. The model reaches motivated customers with an information/image-rich communications message. Because the entry barriers are so low, smaller firms can set up this kind of site as well or in some cases even better than larger firms. Examples of the brand awareness and image-building model include:
Ford (www.ford.com) not only lists all the models of its seven famous automotive brands, but also posts its environmental policy, cleaner manufacturing, community involvement, and corporate citizenship report.

Reebok (www.reebok.com) lets visitors read about sports and fitness, hear from Reebok-sponsored athletes, and learn about Reebok's human-rights activities, among other things.

Figure 3: Emerging models of e-commerce website design.


Cost saving model: Saving from commercial activity on the web includes cost-effective savings and productivity savings. By directly meeting information needs, a website can be highly cost-effective. Many companies now use their website to support the ownership phase of the customer service life cycle. Productivity savings arise from reduction in order and processing costs and more efficient inventory management. Cost savings result through reduced brochure printing and distribution costs and reductions in order taking as customers use fill-out forms to prepare their own orders. As control is effectively transferred to the customer, customer satisfaction might actually be increased. Examples of the cost saving model include:

- Microsoft (www.microsoft.com) provides voluminous support material, live audio broadcasts of Microsoft conferences, product user groups, and free downloads of the patch and supplemental programs.
- FedEx (www.fedex.com) has a web-based parcel tracking service. The web site saves at least 100,000 shipment tracking requests a day. The savings from reducing the number of employees in answering standard customer inquiries are tremendous.

Promotion model: The promotion model represents a unique form of advertising that attracts a potential customer to a site. The objective is to attract the user to the commercial site behind it. In many cases, websites provide free gifts to get users' attention. The gifts typically include digitized material such as software, photographs, music, and consumer reports. Examples of the promotion model include:
- Auto-By-Tel (www.autobytel.com) offers a comprehensive consumer report for all major manufacturers. It attracts consumers to visit the site to read the report and compare the price. The web site produces significant sales for local car dealers.
- Kodak (www.kodak.com) provides technical help and tutorials for its digital cameras and offers a library of colourful, high-quality digital images that are downloadable.

**Info-mediary model:** An info-mediary may offer users free internet access or free hardware in exchange for detailed information about their surfing and purchasing habits. This is more likely to succeed than the pure promotion model. Data about consumers and their buying habits are extremely valuable. Some firms are able to function as info-mediaries by collecting and selling information to other businesses. The model can also work in the other direction: providing consumers with useful information about the web sites in a market segment that compete for their dollar. Examples of the info-mediary model include: Audio Review (www.AudioReview.com) is a site that allows users to exchange information with each other about the quality of products and services - or the sellers with whom they have had a good/bad purchase experience. Other sites take the concept a step further by integrating an intelligent agent into a web browser. Such agents monitor a user's habits, thereby increasing the relevance of its recommendations to the user's needs - and the value of the data to the collector. New York Times (www.NYTtimes.com), a content-based site, is free to view but requires users simply to register (other information may or may not be collected). Registration allows inter-session tracking of users' site usage patterns and thereby generates data of greater potential value in targeted advertising campaigns. This is the most basic form of info-mediary model.

The following eight models that are based on the on-line/transactional design strategy include:
1. Brokerage model;
2. Retail model;
3. Mall model;
4. Advertising model;
5. Subscription model;
6. Community model;
7. Manufacturer model; and
8. Customization model.

These are popular models that provide on-line transaction services for companies to make profits on the web.

**Brokerage model:** Brokers are matchmakers. They bring buyers and sellers together and facilitate transactions. Those can be business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets. A broker makes its money by charging a fee for each transaction it enables. Examples of the brokerage model include:

- e-Trade (www.eTrade.com) is an on-line financial brokerage, where customers place buy and sell orders for transacting financial instruments. Also, travel agents fit into this category. In this model, the broker charges the buyer and/or seller a transaction fee. Some models work on volume and low overhead to deliver the best-negotiated prices.
- World Chemical Exchange (www.ChemConnect.com) is an increasingly common model in B2B markets. In this model, the broker typically charges the seller a transaction fee based on the value of the sale.
Retail model: E-trailers are an Internet version of classic wholesalers and retailers of goods and services. Sales may be made based on list prices or through auction. In some cases, the goods and services may be unique to the web and not have a traditional brick-and-mortar storefront. Examples of the retail model include:

- eToys (eToys.com) is a toy business that operates only over the web. The method of selling may be list price or auction.
- Lands' End (www.Landsend.com), a traditional catalogue company, has now migrated from mail order to a web-based order business. There is the potential for channel conflict. Catalogue marketing can prove to be an asset if cleverly integrated into web operations.

Mall model: An e-mall hosts many on-line merchants. The mall typically charges setup, monthly listing, and/or per transaction fees. The virtual mall model may be most effectively realized when combined with a generalized portal. Also, more sophisticated malls will provide automated transaction services and relationship marketing opportunities. Examples of the mall model include:

- Yahoo! Shopping (Shopping.Yahoo.com) is a cyber shopping mall. It allows customers to visit just one site for all their shopping needs. Since it is an attractive and well-promoted site, it attracts many more visitors than any individual store could.
- zShops (zShops.com) is a virtual mall, but one that will process the transaction, track orders, and provide billing and collection services. It brings buyers and on-line merchants to the mall and provides transaction services such as financial settlement and quality assurance. ZShops protects consumers by assuring satisfaction with merchants.

Advertising model: The web-advertising model is an extension of the traditional media-broadcasting model. The broadcaster, in this case, a web site, provides content (usually, but not necessarily, for free) and services (like e-mail, chat, or forums) mixed with advertising messages in the form of banner ads. The banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. Examples of the advertising model include:

- Yahoo! (Yahoo.com) is high-volume traffic - typically tens of millions of visits per month - driven by generic or diversified content or services. The high volume makes advertising profitable and permits further diversification of site services. Competition for volume has led to the packaging of free content and services, such as e-mail, stock portfolio, message boards, chat, news, and local information.
- Free Merchant (FreeMerchant.com) gives users free web services, site hosting, and Internet access. Freebies create a high volume site for advertising opportunities.

Subscription model: Users pay for access to the site. High value-added content is essential. Generic news content, viable on the newsstand, has proven less successful as a subscription model on the web. A 1999 survey by Jupiter Communications found that 46% of Internet users would not pay to view content on the web. Some businesses have combined free content (to drive volume and ad revenue) with premium content or services for subscribers only. Examples of the subscription model include:

- Quote.com (www.Quote.com) is an example of a site profitably selling investment information. It creates a unique and must have content that draws investors to pay a subscription fee for the information.
■ ESPN SportsZone (espnnet.sportszone.com) attracts more than 250,000 visitors a day with free, frequently updated sports information, while 50,000 subscribers pay $5 per month to access detailed background information, columns, reports, and more.

**Community model:** The viability of the community model is based on user loyalty (as opposed to high traffic volume). Users have a high investment in both time and emotion in the site. In some cases, users are regular contributors of content and/or money. Having users who visit continually offers advertising, info-mediary or specialized portal opportunities. The community model may also run on a subscription fee for premium services. Examples of the community model include:

■ Family Radio (FamilyRadio.com) is a Christian radio station site. It is predicated on the creation of a community of users who support the site through voluntary donations. Not-for-profit organizations may also seek funding from charitable foundations to support the organization's mission.
■ Guru (Guru.com) provides a source of information based on professional expertise and the experience of other users. It is typically run like a forum where persons seeking information can pose questions and receive answers from (presumably) someone knowledgeable about the subject.

**Manufacturer model:** This model is predicated on the power of the web to allow manufacturers to reach buyers directly and thereby compress the distribution channel (i.e. eliminate wholesalers and retailers). The manufacturer model can be based on efficiency (cost savings that may or may not be passed on to consumers), improved customer service, and a better understanding of customer preferences.

■ Micron (www.micron.com), a computer manufacturer, sells its computer directly to customers on the web. Since there is no intermediary the distribution costs or cost-of-sales shrink to zero.
■ Flower bud (www.Flowerbud.com) sells fresh flowers directly to customers on the web. Perishable products that benefit from fast distribution, like fresh flowers, may prove advantageous by eliminating middlemen.

**Customization model:** This model provides customers with content that is customized to meet their preferences. By completely customizing information needs, a website can be highly attractive to visitors. While this model represents a novel use of e-commerce technology, it is unclear how large a paying market exists for this kind of information. Examples of the customization model include:

■ My.Netscape (My.Netscape.com) is a personalized portal. The generic nature of a generalized portal undermines user loyalty. The personalized portals allow customization of the interface and content. This increases loyalty through the user's own time investment in personalizing the site.
■ Intelligent Agents (BargainFinder.com) are programs that answer to user problems with navigation in the chaos of the Internet. Bargain Finder not only helps users find a good price but also learns from past user behaviour to help optimize searches.
2.1.3 Creating Accessible Webpages

The kind of disability experienced by a web user has a profound impact on his or her ability to access the information found on a typical web page. A person's disability will also influence the type of adaptive technology she or he utilizes to view web pages. Understanding how inaccessible web pages create barriers to the optimal use of adaptive equipment in rendering web page information gives developers a context in which to include accessibility elements within their pages (Lilly, 2001).

*Individuals with visual disabilities:* People with visual disabilities may experience low vision, functional vision, colour blindness, or blindness and have problems seeing computer screens and using keyboards (Cunningham and Coombs, 1997). Examples of adaptive technology they might use include screen magnifiers (which increase the size of text or images on a computer screen), speech recognition software used with a microphone or another speech input device (which enables the user to speak commands that are then recognized and followed), and screen readers and voice browsers (software that reads information on a computer back to the user) (Paciello, 2000). Screen readers and speech synthesizing software respond to text and not images (Cunningham and Coombs, 1997; Coombs, 2000).

*Individuals with physical or motor disabilities:* Persons with physical or motor disabilities may use wheelchairs, requiring the need for adequate space around equipment. They may also have restricted use or no use of their hands and have paralysis, missing limbs, and limited body movement and control; they may often be unable to use standard computer input and output devices (Cunningham and Coombs, 1997). Adaptive technologies used by people with physical or motor disabilities include mouth sticks, head pointers, and infrared devices (Paciello, 2000).

*Individuals with hearing disabilities:* Individuals with hearing disabilities may be hard-of-hearing or deaf and often have little difficulty using standard computer equipment (Cunningham and Coombs, 1997). Adaptive technology to enhance web access for people with hearing disabilities consists of a captioning system and a player or plug-in (e.g. RealPlayer) to provide the captions (Paciello, 2000). Web page authors should add textual equivalents (e.g. captioning) where needed to make aural content accessible (Paciello, 2000).

*Individuals with learning disabilities:* Those with learning disabilities may have visual perception problems and/or aural processing difficulties (Cunningham and Coombs, 1997). Although they may be able to access standard computer equipment and web pages, they may encounter the same challenges as those with visual, hearing, or physical disabilities (ibid). Using the same access strategies for these groups often assists persons with learning disabilities. The W3C WAI's web content accessibility guidelines 1.0 consists of 14 elements that all web page creators should follow (Chisolm et al., 1999).

1. Provide equivalent alternatives to auditory and visual content.
2. Do not rely on colour alone.
3. Use mark-up and style sheets and do so properly.
5. Create tables that can be transformed gracefully.
7. Ensure user control of time-sensitive content changes.
8. Ensure direct accessibility of embedded user interface.
(9) Design for device-independence.
(10) Use interim solutions.
(11) Use the W3C technologies and guidelines.
(12) Provide context and orientation information.
(13) Provide clear navigation mechanisms.
(14) Ensure that documents are clear and simple.

2.1.4 Security

One of the most complex, tangled and emotionally charged issues regarding the internet these
days is security. How safe is data that can be reached through the web? Can it be made temper
proof? Can private information be kept private? Naked in cyberspace by Carole A. Lane
(2000) point out that merely shutting down access to all personal information files not only
isn’t the solution, it maybe counterproductive (Hilts, 1997).

Consortium, 1998) provides a detailed account of common security considerations required in
the design of a web-based system. These include the web server configuration, CGI
programming, and user access control, among others. ISO 7498-2 (ISO 7498-2, 1989) defines
five main categories of security services, namely: authentication, access control,
confidentiality, data integrity and non-repudiation.

Web server security: It must be pointed out that a safe web server is a necessary, although not
sufficient, condition for upholding the validity and reliability of all the cryptographic
measures to be described in subsequent sections. This section discusses a number of measures
that address server security. These measures are very well understood, some of them even
before the prolific use of the Internet. They are often discussed in a form or a set of rule-of-
thumb using a do-do not list (W3 Consortium, 1998).

Website locality and physical security: The web server computer should be protected by
keeping the computer in a locked-away enclosure that is inaccessible to unauthorised users.
Likewise, a computer lock, if it exists, can be used to secure the computer further. A security
policy for controlled access to these keys should be in place to ensure proper key management
(Foo et.al., 1999).

Web server configuration: The configuration of access rights to critical files in the web server
is very important. Only operating systems with at least a built-in password-based access
control facility can be employed. Care must be taken to ensure that an ordinary local user
cannot, whether intentionally or otherwise, change the web server configuration file or the
document tree in such a way that a security loophole is created. Hence file permissions in the
server's directories must be carefully tailored in order to ensure that unauthorized but
legitimate local users cannot indirectly gain access privileges to install application software
and access critical information, such as, the encryption key (ibid).

User access Control: User accesses to the web server, either locally via the intranet or
remotely via the internet, must be controlled carefully. The application trusts all insiders to
carry out their respective duties without using their designated privilege against the company.
The procedures adopted for local user control could be a common standalone local area
network (LAN) security policy. Control over remote users can be achieved through
configuration set-ups of the web server, use of firewalls or proxy servers. Access control
capability provided by web servers to authorize accesses from other hosts as specified in terms of internet protocol (IP) addresses and/or host names are employed in this regard. Care must be exercised in cases when a browser is fetching documents through a proxy server. In this instance, the web server will only recognise the IP address of the proxy in such a set up, but is unable to identify the real user. This means that if the proxy is in a trusted domain, anyone can use that proxy to access the web site. Unless a particular proxy can be trusted to do its own restriction, it becomes imperative not to add the IP address of a proxy (or a domain containing a proxy server) to the list of authorized addresses (Foo et.al., 1999).

Password control: Good password policies and control should be implemented for the system. Users with login privileges should be made to choose good passwords. A poorly chosen password is likely to be guessed and used by unauthorised users. The critically important administrator's password must be carefully controlled. A policy for regular changes to password must be enforced (ibid).

Turn off unused services: Unused services should be turned off whenever possible. For example, if there is no need to run a file transfer protocol (FTP) service on the web server host, the FTP software should either be removed or disabled (ibid).

Check system and Web logs regularly: Both system and web logs should be checked regularly for suspicious activity. Normal checks include the identification of accesses involving system commands or extremely long lines in URL requests. The former may indicate an attempt to trick a CGI script into invoking a system command; the latter may be an attempt to overrun a program's input buffer. Particular attention should be focussed on repeated attempts to access password-protected documents. These could be symptomatic of someone trying to guess a password (W3 Consortium, 1998).

Keep the newest service pack: Newest update packs of system software regularly distributed by vendors should be carefully analysed with respect to security implications. This may reduce the bugs in the system and provide more security but may also enhance other performance aspects at the expense (albeit unintentionally and indirectly) of security needs (Foo et.al., 1999).

Software security: According to (Foo et.al., 1999), authentication, confidentiality and data integrity can be addressed by well-studied cryptographic techniques. In using such techniques, it is recognized that information enrooted on the internet can pass through numerous computers before it reaches its destination. A malicious user of any of the intermediary computers can monitor the Internet traffic enroots, eavesdrop, intercept, modify or replace the data along the way. Cryptographic techniques can be used to protect these data. There are two kinds of key-based encryption systems: symmetric and asymmetric systems (c.f. Schneier, 1996). An analysis of the security requirements reveals that a simple cryptographic protocol turns out to be sufficient for the application concerned. The protocol is carefully designed by following the design guideline suggested in (c.f. Abadi and Needham, 1994).

Figure 4(next page) according to (Foo et.al., 1999), shows the system architecture of the web-based integrated customer support prototype system, (c.f. Liu, 1998). This system is designed to support four main functions:
1. **Web-based database retrieval**: This allows remote customers to access and retrieve service records from the customer service (or knowledge) database through a web-based retrieval tool. This database contains past customer service records that serve as records of problems as well as to provide the knowledge to tackle similar problems. These retrieved service records can then be subsequently used directly by customers to solve their problems.

2. **Machine translation**: In order to exploit the expertise and share experiences gained by regional service engineers in Asia, an online translation of service records from English to other languages (such as Chinese and Japanese) is provided. This translation is achieved by simplifying and redefining the sentence structures used for documenting the service records so that a Multilingual Translation module can be used to carry the translation with the aid of translation look up tables. This will allow customers from within the region to gain access to one centralised service database to rectify simple problems encountered in the operation of their machines.

3. **Intelligent fault diagnosis**: A CLIPS expert system-based inference engine has been incorporated into the system based on a rule-based approach. The purpose of this inference engine is to support intelligent fault diagnosis to suggest possible remedial actions according to the fault-conditions reported. This facility is provided as an alternative to the web-based database retrieval capability in cases where fault conditions are not available in the database.
4. **Video-conferencing**: A low-bit rate video-conferencing system is incorporated into the system to support a different number of video-conferencing modes. This includes the normal video-conferencing mode for interpersonal communication between customer and service engineer, a picture phone mode where enlarged still images are captured by the customer and viewed instantaneously by the service engineer, and an audio-priority mode where sound recordings (of a faulty machine or part) are captured at high resolution by the customer and transmitted to the service engineer who will be able to play it back and analyze the accompanying waveform.

### 2.2 Customer Service in Online Environment

In the offline world 30% of a company’s resources spent providing a good customer experience and 70% goes to marketing. But online 70% should be devoted to creating a great customer experience and 30% should be spent on ‘shouting’ about it.

---- Jeff Bezos, Amazon.com (Business Week, March 22, 1999, p.30).

**Importance of online customer service**: Customer service applications in electronic commerce are more critical than in conventional sales, since customers and merchants do not meet face-to-face. A click of a mouse is enough for an online customer to select a new provider. Electronic commerce is exponentially increasing the availability of information, giving customers access to more knowledge, of better quality and faster than before. Businesses online provide an information-rich environment by which competitors can identify, match and improve product innovation. A company that can respond to the needs of customers, accommodate their requests promptly and support their buying decisions creates value and wins customer patronage and loyalty (Singh *et al.*, 2001).

Online services such as easy search of products and services, provision of product specifications that reduce communication costs, secure electronic payment systems to complete transactions, updated product delivery information and quick responses to customer queries are important to win online customers and to make them keep coming back to the site for further purchases (Turban *et al.*, 2000).

Archer and Gabauer (2000) emphasizes that building and maintaining customer relationships are the key to success in e-commerce, which depends on maintaining effective customer service. They also suggest that in e-commerce, unless service is maintained, customer loss may result, more than offsetting any cost-efficiencies due to the introduction of e-commerce technology. Relationships in the business-to-business environment are based heavily on information exchange, which has a fundamental effect on market growth and structure. In B2C e-commerce, Singh *et al.* (2001) suggests that effective customer support and services are vital to encourage customers to shop online as it is a lonely experience, does not allow touch and feel and have a high degree of concern regarding security and privacy of information.

#### 2.2.1 Automated e-mails, instant messaging and Web call-back

The most popular tool for customer service is e-mail. Inexpensive and fast, e-mail is used to disseminate information (e.g. catalogues), to send product information and order confirmations, to conduct correspondence regarding any topic with customers and business partners, and responding to enquiries from customers. To answer a large number of e-mails
quickly and cost-efficiently automated e-mail reply systems are increasingly implemented. Automated e-mail reply responses to customer inquiries are developed using intelligent agents that recognize key words and quickly respond to common queries (Kalakota and Whinston, 1997).

Recognizing that their businesses are at stake, smart E-retailers finally understand that they must deliver high-quality customer service in order to survive. That means everything from responding to consumer E-mail within a few hours to offering individual contact with service representatives via instant messaging and web chat. Customers expect on-time delivery, and they want instant service gratification or they're likely to click away to another site. Today's online shoppers expect to receive the same customer service they get at brick-and-mortar retail stores--a clerk to answer questions, real-time assistance in finding products, and delivery and fulfillment information before they make a purchase. To respond to these ever-expanding customer demands, vendors now offer many service technologies that go way beyond plain-vanilla E-mail. For example, automated E-mail management, instant messaging, web call-back, and even speech-recognition software let offline shoppers buy online via the telephone. A growing number of E-retailers are adopting these new technologies and the adopters aren't just customer-service leaders such as Lands' End Inc. and SmarterKids.com Inc. Trip.com Inc. is using Brightware Inc.'s answer application to help the Denver travel site respond to the 25,000 E-mail messages it receives each month from customers (Judith N., 2000).

2.2.2 Building Customer Relationships

Depending on the individual, building customer relationships can imply something about interdependencies or mutual interests, repeat patronage, loyalty, emotional sentiments (warm fuzzies), personalized treatment, interpersonal rapport, targeted one-to-one communications, after-sale service, customer satisfaction, word-of-mouth, or doing something long-term, to name a few. In other words, the practices of building customer relationships are interwoven with the consequences of those relationships, because it is not precisely clear just what a relationship with a customer is (Claycomb, 2002).

The value of customer relationships is particularly noteworthy in the service sector, for a variety of reasons. First, because services are intangible, customers often have little to evaluate prior to making a purchase commitment. The service provider may be the most tangible aspect of the service and, in the eyes of customers, may be equated with the service itself. Customers' perceptions of the quality of the relationship with the service provider may be commensurate with the quality of the service itself. Second, the difficulty of evaluating services prior to making purchase commitments often means that customers must rely on the credibility of service providers and their prior experiences with them to understand whether the promised service will meet their expectations. That is, customers generally do not purchase services, but promises of services. A strong, healthy relationship between customers and service providers engenders the trust that is necessary for customers to commit to the service (ibid).

In an analysis of over 100 service companies, Reichheld and Sasser (1990) confirmed the value of customer relationships in the service sector. They found that, the longer a customer stays with a firm, the more profitable the relationship to the firm. In all cases in the study, the profitability of the customer increased substantially in the second year and the years thereafter. Although Reichheld and Sasser (19990) found that the typical service firm loses
about 20 per cent of its customers annually, those that can decrease their customer defection rates by 5 per cent (e.g. from 20 to 15 per cent) could increase their profits from 25 to 85 per cent, depending on the type of company.

**Relationship-building objectives:** Learning what service providers' specific objectives are for building customer relationships provides some indication of what the phrase means to them, and leads to potentially valuable insights as to their motivations for doing what they do to build customer relationships.

**Encouraging:** To encourage customers to think of the sellers first when considering a purchase, provide better service, encourage customers to speak favorably about sellers, encourage customers to trust, encourage customers to enjoy doing business with the sellers, adding the value to what the customers receive from the sellers and encourage the customers to refer prospective customers to the sellers—these seven items indicate that most marketing managers expect relationship-building programs to improve customers' memory of the business, enhance customer service, increase the likelihood of customers spreading positive word-of-mouth about the company, build customer trust in the company, and enhance customers' perceived value and enjoyment of conducting business with the firm (Claycomb, 2002).

**Relationship-building practices:** A smaller number of service providers commented on the importance of relationship linkages between the organization and customer-contact personnel, suggesting that employees are likely to treat customers the way they are treated by the organization. A few mentioned tactics or programs pertaining to the relationships between customers and other customers, recognizing that customers can influence the service expectations, experiences, and evaluations of other customers. The 18 categories of relationship-building practices are described in greater detail in the sections that follow, beginning with those that were most frequently mentioned and proceeding to those less frequently mentioned according to Claycomb (2002).

**Continuity of communications:** Most service providers seem to subscribe to the principle that customers remember organizations that remember them. Thus, the most popular relationship-building practice seems to be the avoidance of extended periods of time during which customers are not contacted (Lindgren and Crawford, 1999). In addition to keeping the service organization top-of-mind, ongoing contact with customers positions the organization as a valuable resource for them, and as a leader ready to serve and convenient to contact. The longer the typical time period between purchase and repurchase, the more important contact between sales seems to be. Several service providers recognized the importance of communications between sales efforts. Relationship-building contacts involve following up on past sales to ensure that promised benefits have materialized, checking to see if customers' needs, interests or circumstances have changed, recognizing important events or celebrations in customers' lives (e.g. birthday and anniversary cards), passing along helpful information, or just saying hello. Finally, a number of service providers believed that the effectiveness of the communications is enhanced when the process is interactive (Murphy, 1996).

Obviously, personal contact lends itself to engaging customers in dialogue, but less personal forms of communication can invite interactivity too. For example, newsletters, direct mail pieces, and trade advertisements can express the company's willingness to respond to customers' questions, encourage customers to fill out reply cards to receive additional information or surveys to help the company assess customer needs, invite customers to call or
visit their store, log-on to the company's web site, and so on. Claycomb’s (2002) model of customer relationships building practices, see figure5.

**Figure 5:** Customer relationship-building practices and linkages.
**Source:** Claycomb (2002), p.621.

*Service quality:* Although promises of quality may attract customers, service providers frequently expressed the belief that delivery of quality is essential to building and maintaining customer relationships. Service quality refers to the consistency with which customers' expectations are met and the general superiority of the service relative to that of the competition (Gilpin, 1996).

The most common method associated with listening to customers was some form of gathering customers' ideas (e.g. telephone and mail surveys, focus groups, comment cards, advisory groups). Finally, consistently meeting customers' expectations includes responses focusing on providing high quality goods and services. About one-quarter of the respondents using service
quality practices found that top management must support these practices and gain widespread cooperation throughout the firm to successfully implement the service quality initiative (Claycomb, 2002).

**Personalization:** Personalization refers to the customization of some aspect of the service or its delivery, treating each customer as a unique individual with a unique set of service requirements - thereby creating unique fits between customers and services (Goldsmith, 1999). As such, personalization initiatives provide direct linkages between customers and service personnel and between customers and services themselves. Interestingly, personalization practices were recognized on three different levels-interpersonally, operationally, and organizationally. Examples of interpersonal aspects include learning and using customers' names, building rapport by encouraging face-to-face contact between employees and customers, getting to know customers in informal social settings, and acknowledging customers' backgrounds and achievements (Fisher, 1998).

**Service differentiation and augmentation:** It means enhancing perceived value by providing services or service attributes not provided by the competition. The closely related concept of service augmentation involves giving customers something extra (Gilpin, 1996). Many of the personal interviews revealed a more generalized interest in building additional value in the service on a day-to-day basis for example, by augmenting the service with warranties, maintenance checks, telephone help lines, and miscellaneous amenities such as restaurants that provide free after-dinner mints or sport medicine clinics that provide tips sheets to help injured patients treat themselves. Obviously, the success of this type of differentiation through augmentation depends on whether the augmentation is perceived as such and is truly valued by customers (Claycomb, 2002).

**Affective engineering:** Affective engineering is the label we assigned to a range of efforts designed with the intention of evoking customers' emotional responses to make them feel good about the company and otherwise warm and cozy in the relationship with the firm. Research suggests that customers' affective commitment (i.e. emotional attachment to the service provider) is positively related to their willingness to remain in a relationship with a service provider (Shemwell et al., 1994).

**Employee relations:** Employee relations refer to relationship-building practices designed to support the frontline employees who serve customers. Labor-intensive service firms that invest the necessary time, money and effort to recruit, train, equip and motivate their customer-contact employees are likely to enjoy stronger relationships with customers than those that fail to establish frontline employees as a top priority (Gilpin, 1996; Lindgreen and Crawford, 1999).

**Relationship pricing:** Rewarding loyal customers with better prices may be the oldest tool for relationship building. In addition to cementing relationships with customers by rewarding them for their loyalty, many of these programs generate enormous amounts of useful customer and purchase data. Customers may be required to complete a membership application prior to receiving discounts and present an ID card that is electronically swiped prior to each purchase (Duffy, 1998).

**Systems friendliness:** Systems friendliness refers to practices that make it easy and convenient for customers to conduct business with the company. This involves making company representatives accessible, removing contact barriers, ensuring that customer interfaces with
technology are not overwhelming, and not making customers wait for service unnecessarily or perform tasks (e.g. fill out paper work) they would rather avoid (Peppers et.al., 1999).

**Pioneer advantage:** Formulating programs to reach and cultivate relationships with prospective customers before competitors approach them can create a pioneer advantage in that, once the relationships are established, it becomes increasingly difficult for competitors to lure satisfied customers away (Shaw, 1996).

**Trust:** To build trust is to ensure that customers know that the business will stand behind its promise of service and honor its commitments. Customers must trust service providers before they are willing to pay for promises. Therefore, trust is an important element of a relationship-building program, because it builds confidence, fosters cooperation, and gives the service provider a second chance when inevitable mishaps occur (Morgan and Hunt, 1994). It may not be possible to rebuild customer relationships when trust is broken (Gilpin, 1996).

**Cross-selling:** From a relationship-building perspective, however, cross-selling also tests the strength of the relationship in that dissatisfied customers are less likely to purchase additional services than are satisfied customers. Customers’ hesitancy in purchasing additional services provides opportunities to identify and remedy dissatisfactions that threaten the relationship. Cross-selling also builds the relationship in that the sale of each additional service encourages the customer to incrementally invest more resources, more time, or more trust in the relationship (Worthington, 1996).

**Reinforcing ‘thank yous’:** Reinforcement practices are those that encourage customers to repeat desirable behaviors and are based on the principle that reinforced behaviors are more likely to be repeated than those not reinforced. In the context of serving customers and strengthening relationships with them, the seemingly simple act of thanking customers may be the most potent reinforcement tool available to service businesses. For example, one study found that insurance customers were more likely to renew their policies, if they received a thank you letter prior to receiving a renewal notice. Of course, as mentioned previously, it is quite likely that many service providers do reinforce customer behaviors in general and thank customers in particular, but may not consider it as a formal part of their relationship-building programs (Claycomb, 2002).

**Innovations:** Innovations can play important roles in establishing and building relationships with customers (Kandampully and Duddy, 1999). For example, innovations help position firms as market leaders or winners with whom customers want to associate. They enhance customers' perceptions of value when customers know that they are purchasing the latest and most advanced. They rekindle tired relationships when product lines become too familiar, and they extend the relationship life cycle, as customers' needs change and outgrow the current line. Innovations give customers reasons to continually revisit, overcome boredom, and repurchase. When innovations are introduced and others are promoted as being on the horizon, customers are reminded that the present is not an opportune time to sever the relationship. But customers will deliberately try to seek variety by exiting a relationship if they get bored (Sheth and Parvatiyar, 1995).

**Linking of purchases:** Linking of repeated purchases is a broad category of practices. The result is connected purchases designed to reward customers for their loyalty and to ensure that transactions are not discrete. When purchases are linked, there is no opportune time for customers to sever relationships (Liebermann, 1999; Worthington, 1996). Often there are
customer benefits or incentives to link purchases - a form of relationship equity that is lost if the relationship is broken (Gilbert, 1996).

Other examples include membership packages such as season tickets to sporting events, bounce-back coupons distributed at time of purchase but not redeemable until the next purchase, collectible promotional items such as tableware pieces that are more valuable as a complete set than as individual pieces, and frequency promotions that reward purchases with points or miles that have value only if accumulated (*ibid*).

*Service recovery:* For most service businesses there are simply too many details involved in service delivery to expect flawless operations at all times. And unfortunately, when mistakes do occur, it is not uncommon for customers to find out before service providers. Service recovery involves practices companies use to aggressively correct mistakes when they occur and offset customers' inconveniences and other negative consequences caused by these mistakes (Fabien, 1997). In fact, customer satisfaction with the process of service recovery is often more important than the initial service attributes in influencing overall customer satisfaction, future purchase intentions, and positive word-of-mouth communication by customers (Spreng *et al.*, 1995).

*Unconditional guarantees:* Related to service recovery systems are unconditional service guarantees that provide and honor commitments to customers without excuses or hurdles. In other words, companies guarantee services without excessive conditions, limitations, excuses, or hurdles for invoking guarantees (Fabien, 1997). Some service providers guarantee a broader concept than the service itself by guaranteeing customer satisfaction with the service. Although many firms, especially smaller ones, may not have formally articulated and promoted unconditional service guarantees, they do stand behind their products through refunds and exchanges as if they have. It may be that promoting their practice would provide further assurance to customers and thereby strengthen relationships (Davis *et al.*, 1995).

*Customer-to-customer relationships:* Customer relationships are generally thought of in terms of the relationships between customers and the firm. Word-of-mouth communications between customers are rich in information and opinions, and referrals are generally perceived to be among the most influential and unbiased sources of marketplace influence. For example, in a study of retail store shoppers, Davies *et al.* (1995) found that consumers were more likely to seek reassurance from other customers than from employees. Such communications affect customers' purchase decisions, consumption experiences and satisfaction.

*Vulnerability:* Building and maintaining customer relationships may mean accepting some risk, trusting customers, and giving customers something of value without any certainty of making a sale or receiving any sort of reciprocal consideration or commitment. Free samples, diagnoses, advice, meals, gifts, and personal or confidential disclosures are typical vulnerabilities (Martin, 1996).

### 2.2.3 Online and Offline

The telephone may still be the primary medium for customer enquiries, but customers' use of the internet to submit enquiries, do their own research or manage their own accounts is growing fast. So it is only logical that the service customers receive online should be at least as good as that offered offline. Recent research from Jupiter Media Matrix in the US revealed that 29% of businesses did not respond to basic customer service requests via email at all.
Jupiter analysts suggest that email responsiveness creates or destroys perceptions of how committed a business is to customer service, often a major factor in purchasing decisions, yet only 65% of B2B companies respond to email enquiries within 24 hours. Some would say that service is service, whether online or offline. But any standard for online service must reflect the changes in customer expectations that the internet is driving. For a start, it is a 24-hour communications channel, whereas very few companies have 24-hour telephone help lines. That constant availability implicitly gives customers a different expectation of response time. The potential for customer self-service, far beyond that offered by IVR telephone systems, and the informal, unfettered nature of internet communications are other factors (Gautier, 2001).

2.2.4 Factors influencing web-based Customer service

Gommans et al., (2001) consider these factors can be used to influence web-based customer service are as follows:

(1) Fast response to customer inquiries
(2) Easy to contact
(3) Free to contact
(4) Free online applications
(5) Easy payment methods
(6) Fast delivery
(7) Delivery options
(8) Customer reward system

2.2.5 Response

Southcombe (managing director, travel.co.nz, formerly Jet save Travel) believes that response time is the critical factor in online customer service, ‘the faster the better’. In our business it's response, response, response. It's very unusual for a customer enquiry not to turn into a booking when we've delighted them immediately. He believes that sales hype has no place online. People want facts, figures—the guts. They don't want to be romanced or sold. You need to be brutally honest with them. Queries received via the Farmers website are sent to the relevant department, and response times are tracked by the company's e-business manager, with a target response of 48 hours. Woolworths receives 60% of the queries related to its online shopping service via email. Ecommerce director Richard Harrison says the company views emails in much the same light as telephone queries -- customers expect them to be wrapped up immediately. If you give a final response up-front, customer satisfaction will go up 10%, says Houzet, quoting information given at a recent contact centre conference in Chicago. Best practice [for response to emails] now is 24 hours -- a year ago it was 48 hours. We do have consistent approaches to our responses, however it's really up to the consultant to establish a rapport with customers in the best way they know how, says Travel Online's Bell. Clear's Houzet believes that the style of the response needs to suit the tone of the initial enquiry. If you emailed us 'Hi guys' and we replied 'Dear Ms...' and 'yours faithfully', [it would not be appropriate]. Each email is looked at and decided on its merits as to the tone of the response (Gautier, 2001).

Customers’ feedback: Few companies mentioned the monitoring and use of customer feedback to improve online service. Those that did were retailers, perhaps more accustomed to changing the face their public sees. An awful lot of our queries relate to what people want
to see on the site, and asking how they can find something on the site. We've made quite a few changes in our site's navigation as a result, says Farmers' Cook. We get a much larger proportion of our online customers talking to us than we do in store, so we get more information about the quality of their experience. We're much more in touch with those customers than we have ever been in our bricks and mortar business, says Woolworths' Harrison (ibid).

Still, FedEx chairman Fred Smith's famous comments about the package delivery business apply just as profoundly to airline travel: The information about the package (journey) is just as important to customers as the package (journey) itself. Companies in any number of industries that apply this thinking to Web customer service will realize far more than cost savings (Preston, 2001).

**Personal touch:** In the early days of the internet, a handful of companies demonstrated the foresight necessary to tackle the difficult aspects of online customer service, says Jim Sterne. Now everybody has a way for their customers to reach them. Everybody has a new tool in their arsenal. Everybody is going to use it in different ways. The bar has been raised again. We find that automation doesn't generally relate to quality customer service, says Flying Pig's Bradley. Kellogg's uses formatted replies when recipes are requested, but finds that food queries require individual, personalised responses. Travel.co.nz uses automated confirmations, but doesn't count them towards its target of getting back to the customer within two hours (Gautier, 2001).

**Receipt of product and after-sales customer support:** Notification to customers by e-mail of the acceptance of an order, the anticipated delivery date, and later the actual delivery date is a further service that customers appreciate. A thank you, an apology (for delays) and a greeting to customers strengthens the relationship between the shopper and seller. Phone and e-mail contacts for assistance with setting up or installing the purchased product, troubleshooting, the warranty period, and contacts for repairs and improvements information can be packaged and presented as a link on the Web site (Kalakota and Whinston, 1997).

### 2.2.6 K-commerce

K-commerce will be collaborative, involving internal as well as external stakeholders. Even though all the details of this new architecture may not be clear, it is essential to have some idea about it, as it will help in implementing both initiatives today. It also acts as a guide in planning the convergence of the two initiatives. Figure 6 shows the sets of processes connected through communication flows. One vertical stack consists of the internal organization while the other represents different partner organizations. Partners could be suppliers, consumers, or other stakeholders. The term supplier is used in the broadest sense that includes not just raw material providers or parts suppliers but also financial, human resource, marketing, distributor, or IT support service suppliers. Each process within the vertical stack is linked to its counterpart process in the partner organization and forms the layer. It is not necessary that the communication channels are directly linked to the two partners. They may be linked through brokers or market intermediaries, who may add value to the communication and information flows by augmenting them. Understanding of the information processed and communicated within each layer as well as between the layers indicates what systems and technology infrastructure must be put in place (Kocharekar, 2001).
### Five modules of K-commerce

k-commerce Support comprises five modules: k-commerce Desktop, which lets customer-service agents enter problems as customers describe them; k-commerce web, which lets customers troubleshoot problems over the web; k-commerce E-Mail, which integrates Kana communications Inc.'s Customer Messaging System, an E-mail management application; k-commerce IVR, which uses speech-recognition software from Periphonics Corp and k-commerce chat, which integrates e-Share Technologies Inc.'s Net Agent customer-interaction system. Allen Bonde, an analyst at Extra prise Group, expects other customer-service software makers to offer all-in-one contact products. Storing all information in one database cuts the cost of administering multiple databases and lets employees provide personalized service. K-commerce Support lets service reps enter information about customers gathered from phone calls and E-mail, and captures information customers enter in self-service web forms and IVR questionnaires. Sales and marketing staffs can then use the information to research customers and generate sales leads (Hibbard, 1999).

### K-commerce e-mail pack

The k-commerce Support E-Mail Pack allows customers to get automated feedback on questions and troubleshoot problems instantaneously. Customers simply type in their questions using k-commerce web, which uses XML and Inference's patented technology to match the customer request with solutions in the k-commerce knowledge base. The interactive response system converses with the customer until the correct answers are found. If the process needs to be escalated to the contact centre, an email is automatically sent and routed to the proper live agent using e-Gain Email Management System (Inference Corporation, 1999).

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**Figure 6: K-commerce architecture.**


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**Community processes**

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**Support processes**

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**Transactional processes**
2.3 Process of Building Trust

Trust is something that an e-business must strive to achieve over a period of time. Acquiring customer trust depends on many things that an e-business controls. However, customer's trust as such is not under the control of the e-business. Some contributing factors for gaining customer trust are appeal of the web site, product or service offerings, branding, quality of service and trusted seals. Two factors that significantly contribute to the success of e-business are the trust people place in the online businesses and how secure they feel in transacting business on the Internet. Trust is something that has to be earned over a period of time. In the real world, trust is gained both by observing the physical structure of the organization as well as by third party recommendations. Trust brings in repeat business, an essential ingredient for success (Srinivasan, 2004). One way to achieve trust is through an intermediary. It has a two-fold advantage. Many online businesses are unknown to customers. Yet, they have an interest in doing business with the online company because the product or service has a beneficial aspect to the customer. Their primary concern is the lack of knowledge about the business. On the other hand, they have trust in large financial institutions. So they use the financial institution's intermediary role in guaranteeing payment to the merchant and at the same time assuring customers that their satisfaction is paramount. Next, we look at trusted third parties in a different role. These trusted third parties are called agents. The primary role of agents is to act as intermediaries between several merchants and a whole lot of customers spread all over the world. They are independent and provide their service for a free. Their intermediary role involves conflict resolution and customer satisfaction. They have to build the necessary information infrastructure in order to perform this intermediary role. There are many ways to build trust. It is an ongoing process that never stops. Many of the trust builders that apply in the BAM world apply to e-businesses as well. Since the e-businesses are accessible from anywhere at any time, there are additional impediments in building and maintaining trust. Srinivasan (2004) describes the following trust model, see figure 7.

![Figure 7: Trust model.](image)


Around the world, organizations like the Better Business Bureau and the Underwriter's Laboratories have earned the people's trust as independent organizations that look out for the consumer. What they do in the BAM world applies equally in the e-business world. They use their rigorous authentication means to evaluate a product or service. Once the product or
service meets their strict standards, then the organization approves the use of their seal in the business' Web site. The use of such a digital seal in a company's Web site provides a fair amount of trust for the ordinary consumer (Gritzalis and Gritzalis, 2001).

Marketers can build mutually valuable relationships with customers through a trust based collaboration process. Consumers want to know that marketers will handle their personal information with sensitivity. Order fulfillment is another requirement for trust building because customers want to place orders and get merchandise efficiently and with minimal hassles. Lack of clarity about actual cost is a big negative. The best practice is to explain all costs and have an infrastructure that gets the right product of the right buyer in a reasonable period (Dayal et.al., 1999).

According to Dayal et.al., (1999), Trust is built methodically through a step-by-step process in which the consumer and marketer exchange value. Each time the consumer volunteers some personal information, the marketer should be ready to reward the consumer with personalized services and richer experiences. The mutual give-and-take eventually leads to advanced trust based collaboration. As in all relationships, knowing when to be personal is just as important as knowing how to achieve intimacy. Four trust building stages founded by Dayal et.al., (1999), see figure 8.

![Figure 8: The value exchange process. Source: Dayal et.al., (fall 1999), p.67.](image_url)

Above stated four stages of building trust described below according to Dayal et.al., (1999).

- **Attraction:** At the first stage, the consumer browses the site and even makes a transaction. No real relationship exists between the marketer and the consumer, and none may be warranted. The best strategy is to provide the browsers with relevant information and experiences without demanding personal information. At first blush, this may seem like an imbalance between what marketers give and what they get in return. The average consumer on Ralston Purina's Dog Chow website, which offers no product for sale, spends more than
six minutes per session learning how to care for pets. That's far more time--and more focused time--than consumers devote to a 30-second TV ad.

- **User-driven personalization:** At the second stage, consumers start shaping web pages to their specific tastes. For example, CDNow customers can personalize their home pages with favorite artists and wish lists. The company shows it's willing to deliver some value to the consumer before gaining financially. Brokerage firm Charles Schwab now invites users to set up a personal page through the MySchwab service. A user may track stocks and get customized sports news, weather information, and even cartoons. Users aren't required to open a Schwab account to do so.

- **Marketer-driven personalization:** In the third stage, marketers begin using insights provided by consumers to beam information back to them. Thus, CDNow uses its knowledge of a consumer--developed at the earlier stages of trust--to suggest products he or she might like. The consumer then rates the items as on- or off-target. As the process continues, CDNow learns the consumer's preferences and zeroes in on what he or she really likes. It's worth emphasizing that marketers should rein in their urge to make immediate use of data mining and personalization technologies to create user-specific communications. A best practice is to let the user set the pace of personalization and contacts from marketers. User-driven personalization should precede marketer-driven offers. Recent research by Youngme Moon, assistant professor at the Harvard Business School, has shown that premature personalization can backfire. Moon found that consumers were less likely to buy products pitched to them through personalized messages if the messages were based on information they had not explicitly given to the marketer (Harvard Business Review, 1999).

- **Trust-based collaboration:** At the final stage, the marketer and the consumer work together on a very intimate basis. The consumer allows the marketer access to the most sensitive personal information (family, finances, or health) and in turn gains customized experiences and consultative problem solving. In our view, very few online marketers have reached this level of trust with their consumers. The pace of value exchange varies by industry and situation. For example, mortgage shoppers may provide significant financial information in their very first interaction if they need a quick answer. In other situations, the process moves more slowly.

Trust has always played an important role in the partnering process as it has in all business relationships. Rousseau and her colleagues offer the definition ‘trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another’. Similarly, Lewicki and his colleagues describe trust as an individual's belief in, and willingness to act on the basis of, the words, actions, and decisions of another. However, more recent approaches to trust suggests that trust builds along a continuum of hierarchical and sequential stages, such that as trust grows to higher levels, it becomes stronger and more resilient and changes in character (Tomlinson and Lewicki, 2003).
3 Conceptual Framework

Previous chapter provided theories related to the online environment, online customer service and the trust building process. Miles and Huberman (1994, p.18) says ‘the conceptual framework explains, either graphically or in narrative form the main things to be studied.’ In order to collect data and answer the research questions we have figured out some theories we are going to rely on and are presented below regarding our three research questions. Selected theories will be studied for data collection and to focus the main studies.

3.1 Online Environment

Geissler (2001) says, the conformability of consumers would be as more as they gather information from a web site and more likely they are to eventually purchase a product or service online. Ghose and Dou (1998) found that content analysis of the websites has been used in the previous research to examine the degree of interactivity within websites. Since we have learned from different researchers’ studies in the literature review part in this study that content is a very important part of maintaining and attracting customer in the online environment, we decided to follow what Perry and Bodkin (2000) says in part 2.1.1 and Kaplan et.al., (1998) in part 2.1.2 (in this study) as these theories are often cited (c.f. Geissler, 2001., Rosen et.al.,2002) and core part of the websites.

Content

- Search capabilities (Perry and Bodkin, 2000)
- Site maps (Perry and Bodkin, 2000)
- Use and size of images (Kaplan et.al., 1998)
- Use of animation (Kaplan et.al., 1998)
- Color and size of characters (Kaplan et.al., 1998)

Most recent researchers repeatedly demonstrate that the sensory shopping experience contributes to making the sale and building customer relationships and we are going to use what Rosen et.al., (2002) says in chapter 2.1.1 (in this study), for the e-retailer, the sensory shopping experience must be played out on the template of the web page. We are going to rely on Herrington and Louis (1994) where the authors stated that Music, Colour and Lighting are such stimuli that influence the amount of time and money a shopper spends in a store.

Sensory stimuli

- Music
- Color
- Lighting

Geissler, (2001) and Lilly, (2001) describe some important things to examine the degree of interactivity and stickiness within websites what more importantly make customer return and comfortable. We are going to rely on these authors because theories are frequently cited (c.f. Nielsen,1999., Kaplan et.al., 1998 and Rosen et.al., 2002).

Quality design of website

- Facilitation of purchasing process (Geissler, 2001)
- Quality and reliability of information (Geissler, 2001)
- Segmenting, targeting and positioning (Geissler, 2001)
Usability and simplicity

- How simple the online ordering process (Geissler, 2001)
- Steps between purchase decision and order (Geissler, 2001)
- How quickly it answers the questions (Geissler, 2001)
- Accessibility (Lilly, 2001)

Degree of interactivity

- Client relations (Geissler, 2001)
- Feedback (Geissler, 2001)
- Customer service before, during and after the sale (Geissler, 2001)

Security issues in both transaction and in consumers’ personal information are another important part for building trust and for getting consumers back to the online transaction. Here we are going to rely on what Carole A. lane, (2000), Hiits, (1997) and Foo et. al., (1999) said in their studies.

Security

- Private Information of consumers (Carole A. lane, 2000; Hiits, 1997)
- Password control (Foo et. al., 1999)

3.2 Customer Service in Online Environment

In B2C e-commerce Singh et. al., (2001) suggest that effective customer support and services are vital to encourage customers to shop online as it is a lonely experience, does not allow touch and feel and have a high degree of concern regarding security and privacy of information. In this part we relies on Singh et. al., (2001), Judith, (2000), Claycomb (2002) and Turban et.al., (2000) and because these are recent studies and also very intensive to the depth of the point.

Maintaining effective customer support

- Providing customers with more recent, adequate and faster information (Singh et.al., 2001)
- Providing product specifications (Turban et.al.,2000)
- Automated e-mails, instant messaging and web call back (Judith, N., 2000)
- Promises of services (Claycomb, 2002)
- Encouraging (Claycomb, 2002)
- Telephone help lines (Claycomb, 2002)

3.3 Process of Building Trust

According to Srinivasan (2004) and Dayal et.al., (1999) trust is built methodically through a step- by- step process in which the consumer and marketer exchange value. Each time the consumer volunteers some personal information; the marketer should be ready to reward the consumer with personalized services and richer experiences. Since the e-businesses are accessible from anywhere at any time, there are additional impediments in building and maintaining trust but according to those authors, the following factors lay a base of the process of building trust. In this part of the study we are going to rely on above stated authors because those are more recent.
Appeal of the web sites (Srinivasan, 2004)
Quality of product and services (Srinivasan, 2004)
Order fulfillment (Dayal et al., 1999)
Trusted third party (Srinivasan, 2004)

3.4 Emerged Frame of Reference

From the above conceptual discussion about allowing us to answer this study’s research questions, the following frame has been emerged what will guide this study’s data collection. See figure 9.

Srinivasan (2004) says, trust is ongoing process that never stops. Therefore ‘process of building trust’ is put in the heart of the figure of reference frame above which is consists of customer service and online environment in e-Commerce.

3.5 Delimitations

The area of this study is business to consumer (B2C) e-Commerce. This is because we have considered the online environment and online consumer trust and B2C is more prevalent for customers along with the trust factor. As a matter of time constraints, we will focus on the companies’ websites to gain understanding of the customer service and the process of building trust. The opinion of customers will not be considered. This process will help us to interact with the websites and also understand the web environment. The theories related to K-commerce provided in Literature Review in this study are not going to be relied on for data collection and analysis because of reliability and validity.
Chapter 4

4 Methodology

This chapter describes the methods used in this thesis and also which best fit this study. This chapter will also provide us with a guideline on how to collect process and analyze data. There is also a presentation of the research design with data collecting methods and process.

A methodology refers to the choices we make about cases to study, methods of data gathering, and forms of data analysis in planning and executing a research study. So our methodology defines how we will go about studying this phenomenon. In social research, methodologies may be defined very broadly (qualitative or quantitative) or more narrowly (grounded theory or conversation analysis). Like theories, Silverman (2003) suggests that, methodologies can not be true or false, only more or less useful.

The research methodology that will be used for collecting the data necessary to answer the research questions is a series of steps followed in this study. According to Foster (1998), the following figure (see figure 10) says the research paradigm and at the same time we will use certain quality criteria (reliability, validity, etc.) in this study to satisfy certain standards.

![Research paradigm](image)

**Figure 10:** Research paradigm presentation for methodology.  
**Source:** Foster (1998), p. 81

### 4.1 Research Purpose

Yin (2003) says, when and why would we want to do case studies, should we consider doing an experiment instead a survey or a history, these and other choices represent different research strategies. Each is a different way of collecting and analyzing empirical evidence. The more appropriate view of these different strategies is a pluralistic one. Each strategy can be used for all three purposes- exploratory, descriptive or explanatory.

*Exploratory research* is often conducted because a problem has not been clearly defined as yet, or its real scope is as yet unclear. If research questions focus mainly on ‘what’ questions, either of two possibilities arises. Some types of ‘what’ questions are exploratory such as, ‘what can be learned from the study of an effective school.’ This type of question is a justifiable rationale for conducting an exploratory study, the goal being to develop pertinent hypothesis and propositions for further inquiry (Yin, 2003).
Descriptive research provides data about the population or universe being studied. It focuses on the accurate description of the variables in the problem model. Descriptive research is appropriate when problems are fairly well defined and there is no intention to investigate cause/effect relationship (Yin, 2003).

Explanatory studies are valuable for understanding questions of efficacy. ‘How’ and ‘Why’ questions are more explanatory and likely to lead to the use of case studies, histories and experiments as the preferred research strategies. This is because such questions deal with operational links needing to be traced over time, rather than mere frequencies or incidents. Even a single case study can often be used to pursue an explanatory, and not merely exploratory or descriptive purpose (Yin, 2003).

This study would be considered as descriptive, explanatory and somewhat exploratory for the varying reasons: The study is descriptive because it is our intention to describe the three areas of research in online environment, online customer service and the trust building process and we have collected data from various theories for the research. It is explanatory because we would try to explain the findings by answering the research questions. It is somewhat exploratory because our purpose is to provide a better understanding of trust in the newly emerged field of e-commerce.

4.2 Research Approach

Research can be defined as seeking answers and solving problems in order to expand knowledge. These processes should be systematically conducted (Fredriksson, 2002). A researcher needs methodologies, i.e., methods to approach the subject, in order to scientifically explain the results (Bell, 1999). There are two major approaches to theory development, deductive theory testing and inductive theory building. The difference between the two approaches can be viewed in terms of scientific paradigms, with the deductive approach representing the positivist paradigm and the inductive approach representing the phenomenological paradigm. Perry (1998) says the phenomenological paradigm can be divided into three: critical theory, constructivism and realism (c.f. Bonoma, 1985; Parkhe, 1993; Romano, 1989; Bonoma, 1985; Parkhe, 1993; Romano, 1989). Other researchers (e.g. Miles and Huberman, 1994, p. 17) also concluded that induction and deduction are linked research approaches.

Qualitative and Quantitative Research: Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. In particular there is fairly wide consensus that qualitative research is a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values) with in their social worlds (Denzin and Lincoln, 2000).

The central ideas guiding qualitative research are different from those in quantitative research. The essential features of qualitative research (see table 2 at next page) are the correct choice of appropriate methods and theories; the recognition and analysis of different perspectives; the researcher’s reflection on their research as part of knowledge production; and the variety of approaches and methods (Flick, 2002).
Table 2: Features of qualitative research

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<td>1</td>
<td>Appropriateness of methods and theories</td>
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<td>2</td>
<td>Perspectives of the participants and their diversity</td>
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<tr>
<td>3</td>
<td>Reflexivity of the researcher and the research</td>
</tr>
<tr>
<td>4</td>
<td>Variety of approaches and methods in qualitative research</td>
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Source: Flick, 2002, p.5

According to Flick (2002) qualitative research mainly works with two sorts of data—verbal and visual. Qualitative research is oriented towards analyzing concrete cases in their temporal and local particularity, and starting from people’s expressions and activities in their local contexts. Therefore, qualitative research is in a position to design ways for psychology and social sciences to make concrete the tendencies to transform them into research programs and to maintain the necessary flexibility towards their objects and tasks. The different perspectives in qualitative research and their specific starting points can be put in the following figure 11.

![Figure 11: Research perspectives in qualitative research.](image)

Source: Flick (2002), p.25

It should be clear how critical it is that small- N studies take extraordinary care in the design and measurement of the variables, whether or not it is a so-called qualitative study (Gomm et al., 2000).

Quantitative methods are formalized and structured as it approaches the research questions from a broad perspective. Furthermore, quantitative research is highly controlled by the researcher who has a high degree of control and is objective. Quantitative data is common in studies where clearly hypothesis are stated which can be tested statistically (Holme & Solvang, 1997).

Qualitative research method seems to be perfect for this study since consumer behavior and the buying online and building trust is a matter of understanding human phenomena and matter of investigation of the interpretation and meaning that people give to events they experience. When ‘why’ and ‘how’ questions arise, as Yin (2003) says that is the matter of understanding and refers to the qualitative study; in our study we are going to answer how and why questions and so we intended towards a qualitative study.
4.3 Research Strategy

Yin (2003) lists five research strategies in the field of social sciences: experiment, survey, archival analysis, history and case study and the selection of any of these strategies depends on three distinct conditions as follows:

- the type of research question posed
- the extent of control an investigator has over actual behavioral events and
- the degree of focus on contemporary as opposed to historical events.

If research questions focus mainly on ‘what’ questions, either of two possibilities arises. First, some type of ‘what’ questions are exploratory such as, ‘what are the ways in which an effective school is operated’. This type of question is a justifiable rationale for conducting an exploratory study, the goal being to develop pertinent hypothesis and propositions for further inquiry. The second type of ‘what’ question is actually a form of a ‘how many’ or ‘how much’ line of inquiry, for example, ‘what have been the outcomes from a particular managerial organizations’. Similarly, like this second type of ‘what’ question, ‘who’ and ‘where’ questions are likely to favor survey strategies or the analysis of archival records, as in economic research (Yin, 2003).

Case studies as a research strategy: Yin (2003) means that case study research includes both single and multiple case studies. Certain journalistic efforts can qualify as case studies. Actually, one of the best written and most interesting case studies is about the Watergate scandal.

Generalizing from case study to theory: Theory development does not only facilitate the data collection phase of the ensuing case study. The appropriately developed theory also is the level at which the generalization of the case study results will occur. In statistical generalization, an inference is made about a population (or universe) on the basis of empirical data collected about a sample. This method of generalizing is commonly recognized because research investigators have ready access to formulas for determining the confidence with which generalizations can be made, depending mostly upon the size and internal variation with in the universe and sample (Yin, 2003).

Which strategy to be chosen could be determined based on the formulation of the research questions. The most common types of research questions are formulated as who, what, where, how, and why questions. When how or why questions are used, the researcher can benefit by using case studies, experiments, or historical studies. As the research questions in this study is based on ‘how’ questions, the investigators have no control over the actual behavioral events, and the focus is how customer service and online environment build process of trust among consumers, the choice stands between conducting a survey or a case study/ies. However, as it has been stated that this research will have a qualitative approach, a survey is not appropriate because of its quantitative character. Therefore, the strategy chosen for this study is multiple case studies.

4.4 Data Collection Method

Having decided what kind of problem there is to be investigated; decisions have to be made about what kind of information is needed to enlighten the problem, and how to get the information and data. Merriam (1988) and Wiedersheim-Paul & Eriksson (1991) stated in
Fredriksson (2002) that there are two kinds of data – primary and secondary. Primary data is the investigator collects for his/her purpose and it could be through personal interviews, questionnaire or focus group. Secondary data is the data that already exists like literature studies. There are various ways of collecting data and in the case of a ‘case study data’ there are opportunities to collect from different sources of evidence. Yin (2003) lists a six source of evidence for a case study method of data collection.

- Documentation
- Archival records
- Interview
- Direct observation
- Participant observation
- Physical artifacts

The data collection method ‘case study’ has been selected as fit for this study. We are suppose to understand the online environment such as website content, usability and simplicity, design of websites, degree of interactivity and online customer service such as security and privacy of information, instant messaging and automated e-mails and providing recent information. These situations of collecting primary data are needed to enlighten the problem regarding online customers and that’s why, we decided to use participant observation to browse the websites, interact and observe to answer our questions. We would also send e-mails to judge the response time of the feedback by acting as potential customers. The theories related to the instant messaging and automated e-mails are to be justified by sending e-mail of filling up the feedback form.

4.5 Sample Selection

We have chosen two foreign companies one is from Bangladesh and other from India and one company from Sweden as the case study. As the qualitative research method will be followed for this thesis and for this thesis we will consider case studies method, the random sample selection would not be suitable for the research strategy. We have given privilege of participating both developing countries and developed countries. Grameen Phone Ltd. is one of the largest and fast growing companies in Bangladesh and it provides the mobile communication services all over Bangladesh. Tata Group is one of the largest companies in India providing products and services of seven sectors including engineering, energy, materials, chemicals, communications and IT, services and consumer products. We have selected Tata Indicom which provides telecommunication services and overseas communication services and belongs to Tata Group. In the developing countries like Bangladesh and India, e-commerce penetration is not so high and that is why we have selected two major companies providing business in the public sectors. We like to remind here that building consumer trust in online perspective is our main area of discussion and how customer service and online environment together helps to build trust is the aim of our study. The websites of our cases will be observed to measure the online environment and online customer service activities and interactivities. NetOnNet is our third case from Sweden. The company provides home electronic products to the consumer and it sells its products via online. The company promised to deliver the cheapest product on the net that any other stores in Sweden. The company launched its product selling offer on March 10, 1999 on the web. The company declared as the first and leading pure online store in Europe with operating revenue of 13 million SEK in 2004.
To summarize, we have chosen companies from Bangladesh, India and Sweden and would be presenting how they are similar or differ in the online environment related to our main topic of discussion. Taking three different websites from different countries gives a wider perspective to our research. It also gives further scope for comparison of the areas of our research more extensively.

4.6 Data Analysis

Until the latter part of the 20th century, the analysis of qualitative data was a relatively neglected subject both in the literature and in researchers’ accounts of their methods. Unlike quantitative analysis there are no clearly agreed rules or procedures of analyzing qualitative data. Approaches to analysis vary in terms of basic epistemological assumptions about the nature of qualitative inquiry and the status of researchers’ account (Ritchie and Lewis, 2003).

Miles and Huberman (1994) defined in Foster (1998) that data analysis as consisting of three concurrent flows of activity as follows:

a. Data reduction: it should not be considered to be separate from analysis, but as a part of it. This reduction of data is analysis that helps to sharpen, sort, focus, discard and organize the data in a way that allows for final conclusions to be drawn and verified.
b. Data display: the second major activity which the researcher should go through and this means taking the reduced data and displaying it in an organized, compressed way so that conclusions can be more easily drawn.
c. Conclusion drawing and verification: the final analytical activity for the qualitative researcher. It is here that researcher begins to decide what things mean. They do this by noting regularities, patterns, explanations, possible configurations, casual flows and propositions.

Dominant modes of analysis: Three dominant modes of case study data analysis described by Yin (2003) and those are as follows:

1. Pattern-matching: one of the most desirable strategies is the use of a pattern-matching logic. Such a magic compares an empirically based pattern with a predicted one. If the patterns coincide, the results can help a case study to strengthen its internal validity.
2. Explanation-building: this is in fact a special type of pattern-matching, but the procedure is more difficult and therefore deserves separate attention where the goal is to analyze the case study data by building an explanation about the case.
3. Time-Series Analysis: this strategy id to conduct a time-series analysis, directly analogous to the time-series analysis conducted in experiments and quasi-experiments. Such analysis can follow many intricate patterns, which have been the subject of

Miles and Huberman (1994) stated pattern coding as a way to present data. For a qualitative analyst, pattern coding is important since it reduces large amounts of data into a smaller number of analytic units. It is our aim to collect data by direct observation on the selected three case studies. Then we will reduce data and present in an organized manner regarding each research question. Further, within-case analysis and cross-case analysis will be conducted after pattern-coded table presentation so that conclusions can be made more easily. The within-case analysis will be conducted in a way in which we compared existing theory according to our conceptualisation.
4.7 Quality Standards for Research (validity, reliability):

A research design is supposed to represent a logical set of statements; we also can judge the quality of any given design according to certain logical tests. Whether one is doing case studies or any other type of social sciences, four tests are relevant as Yin (2003) stated by the ref. of Kidder, (1981, pp.7-8.)

a. **Constructs validity:** Establishing correct operational measures for the concepts being studied and is especially problematic in case study research. People who have been critical of case studies often point to the fact that a case study investigator fails to develop a sufficiently operational set of measures and that subjective judgments are used to collect the data.

b. **Internal validity:** This is for explanatory and not for descriptive or exploratory studies. It establishes a casual relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships. This test has been given the greatest attention in experimental and quasi-experimental research. If the investigator incorrectly concludes that there is a casual relationship between x and y without knowing that some third factor z may actually have caused y, the research design has failed to deal with some threat to internal validity. And other is the concern over internal validity, for case study research, may be extended to the broader problem of making inferences.

c. **External validity:** This is for establishing the domain to which a study’s findings can be generalized and it deals with the problem of knowing whether the study’s findings are generalizable beyond the immediate case study. In the simplest example, if a study of neighborhood, changed focused on one neighborhood, are the results true of events in another neighborhood? The external validity problem has been a major barrier in doing case studies. Critics typically state that single cases offer a poor basis for generalizing.

d. **Reliability:** Demonstrating that the operations of a study such as, the data collection procedures can be repeated, with the same results. Here the objective is to be sure that, if a later investigator followed the same procedures as described by an early investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions. The goal of reliability is to minimize the error and biases in a study. One pre-requisite for allowing this other investigator to repeat an earlier case study is the need to document the procedures followed in the earlier case. Without such documentation, even you could not try to repeat your own work (which is another way of dealing with reliability).

Generalization means the extent to which the researcher can make a wider claim on the basis of the research and analysis, rather than stating that the analysis is particular. Gomm et.al., (2000) stated according to Francis Bacon (1620), there are and can be two ways of searching and discovering truth. The one fly from the senses and particulars to the most general axioms, this is now the fashion. The other derives axioms from the senses and particulars, rising by a gradual and unbroken ascent, so that it arrives at the most general axioms last of all. This is the true way, but as yet untried. The idea of ‘naturalistic generalization’ is an important one. There are good reasons to think that we all engage in this routinely in everyday life. Case
study research is clearly capable of contributing to there source available for naturalistic generalization by providing vicarious experiences.

Practical efforts have been made to increase validity and reliability in this study. Some researchers recommend that it is incorrect to make statistical generalization in this type of investigation, since it is important to understand, gain knowledge, and interpret the opinions and experiences of the limited number of samples. Observation method will be carried out by the researchers on the online environment like company’s websites and its interactions. In this qualitative study about the building process of consumer trust in online environment with the touch of interactions in B2C e-commerce we have selected three companies where two of these are from developing countries and other from developed country like Sweden.

The following steps have been taken to ensure validity and reliability of the data:

- Observation checklist provided based on the relied theories for the study for data collection.
- To judge the response time of the feedback and interactivity of instant messaging systems, e-mails have been sent out.
- Multinational companies have been considered for the study which is reliable and playing leading role in the respective field in their countries.
- Multicultural aspect is considered in this study by selecting websites from three different countries.
- The website and its interactivity were observed by the authors who have adequate knowledge of e-commerce and online environment.
- Date was collected according to the observation checklist and conceptual frame where the selected theories have been discussed for this study.
5 Data Presentation

The purpose of this chapter is to present empirical data collected from the three selected case studies. We have followed the selected studies those we relied on and formed the conceptual framework guided by three research questions (RQ). For the sense of diversification and globalization our cases have been selected from three different countries and cultures. We firstly tried to present brief information about each case and then according to the RQ the collected data has been presented in each case. Basically the qualitative data is rather description of why, which and how questions of what would be observed in the presentation. Observation method was followed on the respective websites of the selected case related companies and in some cases e-mail was sent to the case related respondents for situations and data that was impossible for the author to collect from the observation method. Observation checklist and layout could be found in the very last pages of this thesis. We have put the screenshot of the homepage of our three cases while we introduced those cases. It might help the reader to get the clear idea about empirical data we collected from each case by observation.

5.1 Case One: Grameen Phone Ltd.

About the Company
The Grameen Phone is the largest mobile telephone company in Bangladesh. The 26th March 1997 was the launching day for the company with dual purpose: to receive an economic return on its investments and to contribute to the economic development of Bangladesh where telecommunications can play a critical role. This is why Grameen Phone, in collaboration with Grameen Bank (Grameen foundation USA, Grameen Bank and UN’s message-2005), is aiming to place one phone in each village to contribute significantly to the economic uplift of those villages and as of July 2004, it has 1.8 million subscribers after seven years of successful operations. The Telenor (Norway) has the 62% share in the Grameen Phone Ltd. The company has annual revenue of Tk. 12692627000 (TK= Bangladeshi currency), which is equivalent to $ 218.8 million. Grameen Phone’s basic strategy is coverage of both urban and rural areas. Grameen Phone’s Global System for Mobile or GSM technology is the most widely accepted digital system in the world, currently used by over 300 million people in 150 countries. GSM brings the most advanced developments in cellular technology at a reasonable cost by spurring severe competition among manufacturers and driving down the cost of equipment. Thus consumers get the best for the least. By bringing electronic connectivity to rural Bangladesh, Grameen Phone is delivering the digital revolution to the doorsteps of the poor and unconnected. By being able to connect urban areas or even foreign countries, a whole new world of opportunity is opening up for the villagers in Bangladesh.

The company does not offer any product purchase facility online. This is because of very low internet penetration in Bangladesh and also lack of connectivity with banks, other financial institutions and government offices. The company yet provide the facility of paying bills online only customers who have bank account in two banks, Standard Chartered and HSBC. Grameen Phone also allows auto bills pay, credit/ATM/debit card payment in addition of payment through bill copy to the banks. But the services require prior arrangement with respective bank & card authority.
Grameen Phone offers a number of products and value-added services to its valued subscribers. These attractive products and services are designed to cater to the needs of the individual subscribers. There are six products currently being offered by Grameen Phone. The products are: GP Regular, GP National, Anytime 300, Anytime 450, Easy Gold, Easy Pre-paid. In addition, Grameen Phone offers a number of Value-added Services (VAS) to its subscribers. These include Text Messaging (SMS), Voice Mail, Fax/Data service and Wireless Application Protocol (WAP). The SMS-based Push-Pull Service was also launched in January 2003. Grameen Phone Ltd. was the first telecommunications company in the country to offer a Corporate Sales Package initiative, recognizing the importance of the special needs of the corporate customers. The Village Phone Program (VP) has continued its rapid growth. VP Program began from a social commitment made by the shareholders of Grameen Phone that ‘good development is good businesses’. Grameen Telecom (GTC) implements the program in cooperation with Grameen Bank, the internationally renowned micro-credit lending institution. The program facilitates women borrowers of Grameen Bank to the GSM technology through the village phones. They become effectively mobile public call offices. This not only provides rural poor with new, exciting income-generating opportunities, but it also helps to enhance the social status of women from poor rural households. This unique venture has gained widespread global recognition and has been featured extensively in international media. The success of the program won it the ‘GSM in the Community Award’ given by the GSM Association in 2000. Former U.S. President Bill Clinton also lauded the innovative VP Program during his visit to Bangladesh in the same year. According to some research studies, the introduction of VPs has made a tremendous social and economic impact in the rural areas, creating a ‘substantial consumer surpluses for the users.'
5.1.1 Online Environment

www.grameenphone.com is the company’s home page and mainly it is information based web site. The website does not contain the facility of purchasing any product via online. But the site describes in every aspect the total need of customers and browsers. It offers some customer services on the website like e-mail contact, feedback application, automated billing information and ring tone and logo download etc.

Content

Search capabilities: The website is search capable and it has a search option for the browsers at the bottom of the homepage. Almost all information regarding the company and its services is possible to find out by the search engine on the homepage. It contains also pull down menu at the right side of the web pages, which is very locative and takes the browsers to the specific pages or links.

Sitemaps: The website does not provide any sitemap for the browsers. There is option of sitemap link at the bottom of the page but it was not active until February 23rd, 2005.

Use and size of images: The Company’s homepage is very well decorated in terms of use and size of images. Some images on the top of the site mean the type of company’s business. Overall, the images used in the site are very meaningful and suit the theme of the company. But the site does not provide the specified products images on the web such as, the handsets company offers with different models and facilities. The mobile handsets images are not found on the web pages.

Use of animation: Very few animations used in the site and those are at the right side of the home page and very meaningful.

Colour and size of characters: Verdana front of 8.5 size characters look very expressive on the web pages of the company. Red and green these two colours has been used on the site as the symbol of the nation’s national flag and black is the colour of most characters there on the site with white background.

Sensory stimuli

Music: The website is observed lack of music as sensory stimuli.

Colour: The colours used on the site are very attractive and simple and bears no redundancy. Red and green are the mostly used colours on the site, which represent the national flag’s colour of the respective country. We have observed that colour as a sensory stimuli used on the site positively.

Lighting: The website is templated by enough lighting both in images and animations and in texts but it does not contain extra flashing or lightning in any of the pages. What the theory mean by lighting as a sensory stimuli is not observed on the site fully but we can say it provides lighting reasonably on the pages.

Quality design of websites

Facilitation of purchasing process: The website does not offer online purchasing. Although adequate product information, new product information, updated services information, partner
intermediaries’ information and the updated service providing promises are provided on the website. These facilities might help the consumers to buy products offline. The company allows only offline purchasing via dealers throughout the country. The purchasing process is very clearly described on the site. The informative attitude and online bill paying option facilitate some customers.

**Quality and reliability of information:** Quality of information is very comprehensive and related to the company business and its products. The company’s bricks and mortar contact addresses, online customer care services (feedback form, e-mail contact, insta-bill), hotlines and international companies’ participations (telenor.com), user’s forum, world-renowned intermediaries (standard chartered and HSBC), award winning information, internationally recognition (former US president visited) etc. made the site’s information reliable.

**Segmenting, targeting and positioning:** Goal of covering the whole country, providing quality GSM service, village phone program, corporate offers, value-added services, diversifying and differentiating products – these are very consistent, simple and distinctive positioning on the website. The website provides valued image of the products and services and according theory it does not accommodate everyone on the site.

**Usability and simplicity**

*How simple the online ordering process:* The company does not offer any product purchasing via online except some online services. Online services include bill payment by nominated banks and by credit cards, billing information, ring tone and logo download and feedback application. However, the online bill payment option needs pre-arrangement for the customers. The site provides necessary information for ordering the products offline also.

*Steps between purchase decisions and order:* The website does not bear the facility of online purchasing for the consumers. But the information regarding its product placed on the web pages is very comprehensive and allows few steps for purchasing offline. The site also requires very few steps for providing services it offers via online.

*How quickly it answers the questions:* Browsers could easily reach to the point of necessary information using the website. It has the menu list on the homepage of every segmented part of its product and services and also there is a pull down menu choosing any link the browser feels to surf in each page of the website. The observers found the quick answering ability of the site.

**Accessibility:** The website does not support accessibility for the disabled such as for visual, physical, hearing and learning disables.

**Degree of interactivity**

*Client relations:* The website serves client relating information as information clearing house. It provides updating information and offers, product and services info, newsletters, insta-bill service and after sales services.

*Feedback:* The website provides the feedback form and it has the limit of 300 characters and the positive side it asks very few information from the customers. Feedback is provided very quickly after filling up and sending the form it is possible to get reply with in 24 hours (see appendix B, B-1 and B-2). It also provides the detailed contact information both e-mail and telephone and offline addresses for the consumers for any type of feedback. The web pages
gather customers’ private e-mails and phone numbers to establish and maintain direct contact with them and also for further feedback.

Customer service before, during and after sale: The website provides customer service before the sale such as- product information on the web, hotline service, feedback form. Such as during the sale like- payment options, credit policy, bank and branches, tariff and charges. After sales services like- reconnections, SIM replacement, WAP facility, hotline connections, product migration, newsletters, feedback form and information and contact addressees of offline customer care centres, insta-bill service, insta-care service and FAQs.

Security
Private information of consumers: The site requests very few information from the users and customers. The website does not say any declaration about how the company treats the personal information of the consumers.

Password control: The website does not ask for passwords from the users and it has not any part of requiring passwords.

5.1.2 Customer Service in Online Environment

Providing customers with more recent, adequate and faster information: The website keeps the browsers and customers updated with very recent information. The product and services information provided on the web is very adequate. During a one month observation (from 050201 to 050307) of the GP’s website the observers have found very recent information updated on the web.

Providing product specifications: The website provides its products specification very clearly. It also keeps updated with specified product information to the customers.

Automated e-mails, instant messaging and web call back: The website has the instant massaging service which is very prompt and adequate. By the insta-bill service it is possible to get the billing information instantly just after sending the insta-bill form filled up (Appendix C). Grameen Phone introduces INSTA-CARE, an automated service with Integrated Voice Response (IVR) system to meet GP service related queries, 24-hours a day, 365 days in a year! But instead of automated e-mails it has the general e-mail contact and hotline contact number. The customer service provides any inquiry by the contact e-mail (info@grameenphone.com) with in 24 hours (see appendix A). The website does not provide web call-back facility.

Promises of services: The web pages provide the promises of various distinct services on behalf of the company and website contains all the services the company promises to the consumer. The website is observed providing promises of services as customers expect.

Encouraging: The encouraging activities are observed on the website such as- users’ forum, newsletters, SMS shortcuts, disaster aiding invitation by sending SMS for example, a huge amount of money was collected by customers’ SMS sending for the Tsunami victims in 2004. The company sponsors Bangladesh Cricket Team and also organise package programs and competitions and community works. The privacy statement is not observed on the site that is little discouraging for the customer.
Telephone help lines: The website provides the hotlines numbers and also telephone help line numbers for any type of enquiry. The help lines are not toll-free.

5.1.3 Process of Building Trust

Appeal of the website: The positive and service oriented attitude that relates to the consumers is the appeal of the GP’s website. It contains the attitude of providing its promised services in any way.

Quality of product and services it offers: The website offers a variety of comprehensive information about its product and services and also it is easy to measure the quality and reliability of products and services surfing the web pages. Covering the whole country in its network, sharing the GSM technology, winning international awards, providing variety of products and services and branded products (package offers, after-sale services and Nokia, Siemens, Samsung and Sony-Ericsson hand sets etc.) these factors made a quality image for the company and its web pages. The website also provides the international roaming facilities and the related services.

Order fulfilment: The website is observed clarifying the actual cost and quality of the products and services. It contains the ability of taking the customers to the final ordering and also to the after sale services. The website is updated with new products and its services and it clearly declares the actual price and service quality of the products. Though it does not offer online ordering but it helps offline ordering fulfilled.

Trusted third party: The website tells the browser that it deals with internationally trusted agencies like Standard Chartered Bank and HSBC bank and ATM/ credit cards. It contains a separate link on the list of banks and branches that it deals with. The company offers international roaming facility with 229 international roaming partners in 81 countries worldwide. The site provides list of roaming partners and list of countries it operates.

5.2 Case Two: Tata Indicom

About the company

Tata Indicom provides customer and business services in the sector of mobile and telephone technology in India. It is one of the biggest telecom service providers in India and has offices all over India. Tata Indicom is one of the seven key industry sectors of the Tata Group, which are engineering, materials, energy, chemicals, consumer products, services and communications and information systems. Each business sector of this organization has an independent website. We have chosen Tata Indicom (www.tataindicoms.com) under their business sector of communications and information technology.
The Tata Group of Companies has their operations in India and is a 126-year-old company. This company is one of the major companies in India in terms of revenues, jobs generated and operations. This company accounts for 5% of the Indian exports. They have 2 million shareholders and generate annual revenue of $14.25 billion. The energy sector of this group is the main sector, which accounts for 27% of its business. Apart from having offices in India, they have offices worldwide in countries like the United States of America, United Kingdom, Australia, Dubai, Ukraine, and Switzerland etc. Some of the major achievements of the Tata Group are that they have the world’s largest integrated tea operation. The company is also the largest software exporter of Asia and also India’s largest private sector tea and steel producer. This proves the group’s success along with its diversity.

www.tataindicom.com is the homepage for the Tata Teleservices. This site deals with two sectors of the company’s business, one is Tata Teleservices Ltd (TTSL) and another is Videsh Sanchar Nigam Limited (VSNL). Tata Teleservices is part of the Tata Group. With an investment of over INR 9,000 crore (US$ 2 billion) in telecom, the group has a formidable presence across the telecom value chain. VSNL is India's leading international telecommunications service provider. It started as a successor to the erstwhile overseas communication services, and then went on to become the premier provider of international
voice and data services. Under the management of the Tata, it is working to provide efficient and cost effective world-class telecommunications services. Tata Indicom offers a complete range of affordable telecom solutions for consumers’ home and business needs. Tata Indicom mobile, smart wireless service, public phone booths, broadband internet services or centrex and conference services- the company is to present in every sphere of the telecommunications market, endeavoring to make consumers’ life comfortable and hassle free.

Moreover, they offer a very personalized service for the customer in which the customer can have a personal account and get information and pay bills. The customer can pay the bills online or also using their cell phones, via SMS service, by providing their account number and phone details. In the contact us section customers can ask any query related to their product. The customer can get the latest news about any new products in the offering and also various new schemes, which are offered. Also, to attract more customers the company offers the customer to take part in contests in which they could win products. If a customer has a problem for example with his mobile phone he has the option of locating the nearest service station where he could go. So, the company provides this web based customer service in relation to bricks and mortar business. Also, if a customer has a particular query he could ask that via email in the contact us link. The payment methods are either online, using credit cards or providing the bank account details. But a customer can also pay his bills through the SMS service. The company offers personalized service and the customer can hold a personal account on the website.

5.2.1 Online Environment

Content

Search capabilities: The website is search capable and it has a search option at the right middle side of the homepage which makes it more convenient for the customer to look for information if he/she does not want to devote much time. The website is quick searchable having quick links as a pull down menu at the right side upper corner.

Sitemaps: The website provides sitemap for the browsers. There is option of sitemap link at the bottom of the page.

Use and size of images: Company’s homepage is very well decorated in terms of use and size of images. The images at the top of the site describe the company’s business. In the middle the services of the company are divided into consumer and business services. The use of the images presents the company in a very meaningful and lucid manner. Product images with details make sense for the consumers such as mobile handsets images.

Use of animation: Some animations are used in the right hand side of the website mainly to attract the attention of the customer. The download wallpaper, logo and ring tone links contain few animations that are reasonable and meaningful.

Colour and size of characters: Arial font size of 9 size characters is used on the company website. The website is in blue and with white background. The website is observed as a simple and attractive in terms of size and colour of characters.
Chapter 5

Sensory stimuli

*Music:* The website is observed lacking in music as sensory stimuli.

*Colour:* The website is in blue and with white background. It is very simplified and is easy for the customer to look for information. The combination of blue and light blue colour behind the texts and also behind some images made this site colour sensible. The colours used in images also hold a good appeal of the site.

*Lighting:* The website is templated by enough lighting both in images and animations and in texts. But no extra flash of lighting in any special point observed.

Quality design of websites

*Facilitation of purchasing process:* The website provides a very comprehensive way of purchasing process. If a customer wants to purchase a particular product, the customer has the option of seeing the entire product description and the product image. The website provides very clear information of the products which helps to buy offline. For making online payments the customer has to register first. For registration the customer can choose a login ID and a password. For this process, the customer has to furnish personal information like name, address and email ID in the online registration form and choose a login ID and password. The payments are fully secure as it is also mentioned on the website.

*Quality and reliability of information:* The information provided about the products and services very clearly on the site. They not only provide text version but a picture of the product as well. Therefore, the customers have the privilege to see how the product looks like when they want to buy a specific product. The homepage also has a media section that provides information making it more reliable. Tata Indicom is part of the Tata Group that is operating for the last 126 years. Tata Indicom has established offices in many cities in India. The glory of the company, online paying systems by recognised banks and credit cards, sprightly written terms and conditions and also networks with international parties- these all things made this site reliable regarding information provided on the web.

*Segmenting, targeting and positioning:* The website promises to solve all kind of consumers’ needs related to the communication in both voice and data sectors. The target groups and the products segments are much specified but the site is observed as accommodating too many products/service segments.

Usability and simplicity

*How simple the online ordering process:* The company does not offer any product purchase via online. But it offers few services via online. The company offers online ordering only through the signing up and filling up the information and then customer service personnel call or contact them as soon as possible. The website offers online bill paying only through few selected banks and credit cards.

*Steps between purchase decisions and order:* The website is not observed bearing the facility of online purchasing for the consumers. But the information regarding its product placed on the web pages is very comprehensive. If a consumer is interested in purchasing a specific product, he fills in the detail of his name and contact details and the customer service representative gets in touch with the customer.
How quickly it answers the questions: The website is very well defined and a customer can access information in a fast and efficient way. One of the many options a customer has is that of quick links with pull down menu in which the customer can look for specific information directly.

Accessibility: The website does not support accessibility such as visual, physical or hearing facilities for the disabled people.

Degree of interactivity
Client relations: The website provides updated information and various products and services to the customers. There is the media section in which visitors can see the latest launch of products by the company and some other information like AGM’s. Moreover a customer can pay bills online and ask online queries. The site also observed providing free ring tones, games, wall papers and logos which add value to the clients.

Feedback: The website provides the option of having online customer query which can be asked to the customer care centre. It also provides the detailed contact information both e-mail, telephone and offline addresses for the consumers for any type of feedback. The site collects personal information of the customers for providing further feedback.

Customer service before, during and after sale: The main service the homepage provides is that of paying bills online and asking online query. When a customer pays a bill he gets the confirmation that it has been received. Moreover, the customer also gets a reminder that he is to pay the bill.

Security
Private information of consumers: The site declares how it treats with the consumers’ private information. The site requests more information from the users and customers while they fill up details for online membership. Moreover, it offers very personalized service for the customer in which the customer can have a personal account and get information and pay bills. The payments are fully secure as it is also mentioned on the website. The website uses Secure Sockets Layer (SSL) technology to exchange online information. SSL protects information that is sent over the Internet by encrypting it and thus prevents misuse.

Password control: The customer has the provision of having a personalized account along with a password, which the customer can only have access to.

5.2.2 Customer Service in Online Environment

Providing customers with more recent, adequate and faster information: The website provides latest and updated information on a regular basis. During the one month of observation (050201 to 050307) of the company’s website we have found the information is updated regularly.

Providing product specifications: The information provided about the product is of good standard. The website not only provides text version but images of the product as well. Therefore, the customers have the privilege to see how the product looks like when they want to buy a specific product.
Automated e-mails, instant messaging and web call back: The website has the online customer enquiry in which customers can ask queries about any product from customer care centre. The customer has to furnish some personal details. But the site does not provide automated e-mails or instant messaging and web call back.

Promises of services: The web pages provide the promises of various distinct services on behalf of the company. There are three ways to contact the company: e-mail, telephone or personal visit.

Encouraging: The customer can pay the bills online or also using their cell phones, via SMS service, by providing their account number and phone details. In the contact us section customers can ask any query related to their product. The customer can get the latest news about any new products offering and also various new schemes that are offered and to attract more customers the company offers the customer to take part in contests in which they could win holiday special discounts. The website has a special section called Tata Zone in which the customer can download ring-tones, wallpapers and logos. Moreover, by providing privacy and security statements the website encourages the customers to avail their facilities.

Telephone help lines: The website provides the hotlines numbers and also telephone help line numbers. Tata Indicom brings its IVR (Intelligent Voice Reading) services, which gives faster answers to any service related query in consumers own language. But it does not provide toll-free numbers.

5.2.3 Process of Building Trust

Appeal of the website: The important thing about the website is that they have made it very interactive and personalized for the customer. The customer can access wide, varied but accurate information regarding the products. The website is easy to browse and looks attractive because of the colour and background.

Quality of product and services it offers: The website offers very comprehensive information about the products and services. The company sells well-known products and brands of Nokia, Motorola, Samsung and LG, which meet the international standards.

Order fulfilment: The website does not offer any online ordering facility. The actual cost of the products is not mentioned on the website. The site does not make fulfil the customer before he decides to order. The product specifications with images helps customer to get the idea about products and services. The information provided on the web is somehow helps to buy offline.

Trusted third party: The customer can pay online using credit cards and can also provide their bank account information to Tata Indicom. The company allows Visa and MasterCard and also online paying opportunity through the Citibank, IDBI bank, HDFC and SBI bank. Auto pay system and by SMS bill paying system-registered users can pay the bills both from their bank account and just only sending an SMS.
5.3 Case Three: NetOnNet.se

About the company

www.netonnet.se is the company homepage. The web pages allow consumers to purchase online and also customer services via online. The web pages are in Swedish only and this is the only disadvantage for the global or international browsers or consumers not to having English version of the site. The company launched its product on the net in March 10, 1999 with the promise of selling cheapest product than other stores. Low price and high service is company’s vision. The company clearly declared how they maintain low prices and other services on the website. The company provides two years guarantee for various products and except some computer and mobile phone products as they have different conditions from the suppliers. The website provides all types of information and contact address, telephone numbers and the list of the board members and owners. The delivery systems, service conditions, after sale services and company’s warehouse locations with map directions etc. are mentioned very clearly on the web. The company presentation and annual report launched on the web and it expedites the reliability of the information about the company. Netonnet has more than 450,000 customers throughout Sweden and nearly 250,000 in Germany and 17 million SEK (Swedish kronors) operating income in 2003.

Figure 14: Homepage of the Net On Net online home electronics selling company.
Source: www.netonnet.se

The company operates internet shops in Germany and Belgium and participates in the stock markets. The website provides the economic model and comparison between internet shops and offline shops.
Chapter 5

The economics of the NetOnNet model

Figure 15: Economic model
Source: www.netonnet.se

5.3.1 Online Environment

Content
Search capabilities: The webpage contains a search engine what is very effective searching information related to the company and its products.

Sitemaps: The website does not provide any sitemap.

Use and size of images: The use of images on the web is very relevant and necessary to the point. Size of images are also very attractive but simple. The website provides products images which motivate the customers to purchase online.

Use of animation: Very few animations used in the site such as on the photo and video camera link there is one animation used and very simply. There is no redundancy with unnecessary images on the website, where just products images those are currently for sale are launched on the site.

Colour and size of characters: Verdana 8.5 has been used on the site, which is very attractive and simple looking on the web. Some product names and headings are in bold format of verdana 8.5.

Sensory stimuli
Music: The website is observed lacking in music as sensory stimuli.

Colour: The colours used on the site are very attractive and simple and bears no redundancy. Red and black are the mostly used colours on the site where black text in white background is used on the homepages.
Lighting: The website is templated by enough lightning both in images and animations and in texts, especially when the products image shown on the web pages, necessary lighting made sensibility to the consumers. But the flash of lighting in some special points is not very prevalent on the site.

Quality design of websites
Facilitation of purchasing process: It is very easy and just like clicking on the chosen products and then selecting the payment methods and addresses and then it is complete. The website offers several options for payment and also for getting credit from the bank and also contains secure payment seal.

Quality and reliability of information: Information provided on the net is highly distinctive and reliable under the link of ‘contact us’ and ‘good to know’ and press and finance information. The lack of redundancy of putting advertisement and other information and also winning award receiving from the princess and annual reports make this website’s reliability very high.

Segmenting, targeting and positioning: With the promise of selling cheapest products on the net and providing very effective online services and online product purchasing facility throughout whole Europe seem to be in the sustainable position on the web for the company. The company also segmented internationally having internet shops and operations in Belgium and Germany. The website is observed to accommodate the home electronic products user.

Usability and simplicity
How simple the online ordering process: The online ordering process is very simple with few steps to the final purchase. The purchasing is just like clicking on the product and then pay and then get the delivery.

Steps between purchase decisions and order: There are only three steps to purchase and two steps for billing and recipient address before purchasing.

How quickly it answers the questions: Browsers could easily find the necessary products and detailed information regarding the product and also about the company. Web browsers could easily e-mail or call or fax to the customer service for any urgency.

Accessibility: The site is not having the accessibility for the disabled.

Degree of interactivity
Client relations: Promising to provide effective customer service and ensuring the guarantee and servicing conditions for the purchased product, free membership on the online and information regarding handling the cookies and about the delivery status location facility, present card facility, sales news and annual report publishing on the net. In all these mentioned ways the website maintains its client relations.

Feedback: The website provides the feedback to the customer by e-mailing to the ‘kundservice’ or customer service persons and also by telephone, fax and bricks-and-mortar location of the company (Appendix D). The website requires very little personal information from the customers to provide further feedback.
Customer service before, during and after sale: The website provides the e-mail, phone, fax and offline store addresses and warehouse address for continuing the services. It also offers the guarantee and online delivery tracking service.

Security

Private Information of consumers: The site requests very little information from the users and customers. The website declares how the company treats the personal information of the consumers.

Password control: The website asks for passwords from the users which make it more secure for the users.

5.3.2 Customer Service in Online Environment

Providing customers with more recent, adequate and faster information: The website keeps the browsers and customers updated with recent information. The product and services information provided on the web is very adequate. During a one month observation (from 050201 to 050305) of the NetOnNet’s website the observers have found very recent information updated on the web.

Providing product specifications: The website provides its products specification very clearly. Each product has its image on the web along with the description and price.

Automated e-mails, instant messaging and web call back: The website does not provide any automated e-mails or web call back or instant messaging service.

Promises of services: The website promises two years of guarantee for all types of products except some mobile telephone and computer product which provide for one year guarantee. Low price and high service is the vision of the company portrayed by the online operation.

Encouraging: The encouraging activities are observed on the website are online membership, company awarding information, annual reports and company success and promising of cheapest price on the net. The company provides secured services both for purchasing and personal information provided by the customers. The online customer service contacts of suppliers of NetOnNet observed on the website which is very encouraging for the consumers.

Telephone help lines: The website provides the telephone help lines (not free) numbers and fax numbers.

5.3.3 Process of Building Trust

Appeal of the website: The website contains very simple and has business oriented appeal. The images shown on the website of various products enhance its appeal.

Quality of product and services it offers: The website offers a variety of information which is comprehensive. The quality and reliability of the products and services are easy to measure. It provides after sale guarantee also. Some of the well-known brands the website offers are Sony, LG, Philips, JVC, Canon, Compaq, ADI, Hitachi, Acer, Siemens, Motorola, Ericsson, Minolta and many more.
Order fulfilment: The website is capable of handling and processing easy ordering process and the product is deliverable just after the payment. The costs of all the products offered are mentioned on the website. This makes the consumer purchase hassle free.

Trusted third party: The website contains the security seal of online payment and payable via VISA and Master Card, company’s present card, SEB or Nordea Bank account or via Handles Bank credit system and all those are internationally branded parties. Launching the detail information on the web regarding the company’s financial partners and dealers has made the image of trusted intermediaries.
6 Data Analysis

Empirical data gathered from the three case studies will be analysed in this part. The similarities and differences between theory (from the supported theories and conceptual frame of all derived from the literature review) and empirical data will be presented here separately by each research question. Both the with-in case and cross-case analysis will be conducted here regarding each research question.

6.1 How can the online environment (website contents, design, etc.) be described (RQ-1)?

With-in case Analysis

From the empirical data we are here to analyse according to the theory whether it supports the theory or not or anything new comes up. First we will consider our research question one here which is about the online environment and then we will analyse the theories in it following by each case. The following table is the presentation of analysis of the empirical data for RQ-1. The left column in the table is about the theories we relied on and the three columns at the right side are the analysed data for three cases respectively. From the theories we will first take one and then analyse it with-in cases one by one. The symbols or coding of measurement used in this table (and also in the following tables) is (+/+ ) by which we meant the empirical data support the theory or positive or in the line with the theory, (-/-) by which we meant the empirical data partially support the theory or neutral and by (+/-) we meant that is found in the empirical data but not in the theory and finally by (-/-) we meant the empirical data do not support the theory or negative.

Table 3: Empirical data analysis for R.Q-1 (Online Environment).

<table>
<thead>
<tr>
<th>Variables/ Theories</th>
<th>Case one/ Grameen Phone</th>
<th>Case two/ Tata Indicom</th>
<th>Case three/ NetOnNet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content</strong></td>
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<tr>
<td>Search capabilities</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Site maps</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Use and size of images</td>
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<tr>
<td>Color and size of characters</td>
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<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Sensory stimuli</strong></td>
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<tr>
<td>Music</td>
<td>+/-</td>
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<tr>
<td>Color</td>
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<tr>
<td>Lightning</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
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<tr>
<td><strong>Quality design of website</strong></td>
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<tr>
<td>Facilitation of purchasing process</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Quality and reliability of information</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Segmenting, targeting and positioning</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
</tbody>
</table>
Chapter 6

### Extension from Table-3

<table>
<thead>
<tr>
<th>Variables/ Theories</th>
<th>Case one/ Grameen Phone</th>
<th>Case two/ Tata Indicom</th>
<th>Case three/ NetOnNet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usability and simplicity</td>
<td>How simple the online ordering process</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Steps between purchase decision and order</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
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<tr>
<td>How quickly it answers the questions</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Accessibility</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Degree of interactivity</td>
<td>Client relations</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Feedback</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Customer service before, during and after the sale</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Security</td>
<td>Private Information of consumers</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Pass word control</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
</tbody>
</table>

**Source:** Author’s own construction

**Measurement tool:**

+/- = Support the theory, positive.

/-+ = Partially support the theory, neither positive nor negative (neutral)

+/- = Found new in the case but not in the theory

/- = Not support the theory, negative.

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### Content

Ghose and Dou (1998) observed that content analysis of websites has been used in previous research to examine the degree of interactivity with in websites.

**Search capabilities:** With respect to website specific characteristics Perry and Bodkin (2000) found that search capabilities used most often in the websites. It suggests the recognition of possibilities of information overload and utilizes web specific capabilities to minimize the negative effects. It also allows the firm to better communicate with multiple audiences. Grameen Phone (GP) web pages contain search engine and it allows multiple audiences to communicate better about the company and its web site. Tata Indicom is search capable has its search option on the homepage. NetOnNet is also searchable and it has a search option in the homepage to find out the necessary product information. All the three cases here support the theory by having search option in the websites.

**Site maps** also recognize that company’s corporate web site would attract multiple audiences and browsers (Perry and Bodkin, 2000). Grameen Phone website does not provide any site maps for the browsers. So we found that it does not support the theory. Tata Indicom provides site maps, which are very directly stated in a simple graphic and thus it is in the line with theory. NetOnNet does not provide any site maps on the homepage. The company’s website is not in the line with the theory regarding site map.

**Use and size of images** and many elements of design and graphic art can be used to convey content on the web and Kaplan *et.al.,* (1998) added that the choices are truly endless. Simplicity of web design (like –use and size of image and information, number of words per line etc.) has become the mantra of reaching to the surfers’ mind. Grameen Phone is neutral in this theory because its website was not observed using images of the products it offers suppose, mobile handsets. But few images on the homepage used very meaningfully those are
in line with the company business and its vision. Considering these situations the case one (GP) partially supports the theory. Tata Indicom supports the theory with simplicity in using images on the web pages maintaining the company business theme and also providing specific products images. NetOnNet also supports the strategy of simplicity of ‘use and size of images’ on the website. This case three also provide the reasonable and clear images of its product and that’s why the case supports the theory.

**Color and size of characters** and its utilization with simplicity involves facilitation of web browsers’ access Kaplan *et.al.*, (1998). According to the author, Grameen Phone maintains the positive image about web visitors’ acceptability regarding colour and size of characters. Tata indicom also supports the theory here using acceptable and simple colour and size of characters on the website. NetOnNet also supports the theory. Case one and case three both used the front Verdana 8.5 size, which observed very simple and attractive with green and red colour and somewhere black colour with white background. Case two used Arial 9 size front with black colour and in white background and also somewhere with blue colour.

**Sensory stimuli**
Herrington and Louis, (1994) stated that Music, Colour and Lighting are such stimuli that influence the amount of time and money a shopper spends in a store. Rosen *et.al.*, (2002) found in several research that the sensory shopping experience contributes to making the sale and building customer relationships for the brick-and-mortar retailer and for e-retailer also. It must be played on the template of the web pages.

**Music**
Case one (GP) does not support the theory as the web site does not provide any type of music as sensory stimuli. The same situations in the case two and case three we observed.

**Color**
Grameen Phone supports the theory by providing acceptable and sensory colours on the web pages. Tata Indicom also supports the theory by using attractive colours on the templates of the web pages. Net on net also support the theory by providing attractive colours on the web pages. The colours of the products images the website provides are very sensory in sense and thus it supports the theory.

**Lighting**
Grameen Phone does not use extra sensory lighting on the templates of the website but it contains reasonable lighting on the pages. It partially supports the theory because lighting as sensory stimuli was not observed on the site. Tata Indicom supports the theory partially by providing enough lighting both in images and in animations. Net On Net also partially supports the theory. Here lighting as sensory stimuli was also not observed on the cases’ web sites. Lighting was just adequate but not stimulating in these cases here.

**Quality design of website**
Geissler, (2001) found in his research survey that many web designers employ the KISS (keep it simple, stupid) principle and designing a complex website or a simple web site can deter or limit interactivity. To be effective the web site must be designed with target audience as the foremost consideration. While consumers visit online they are connected to a vast information store worldwide and the related environment like quality of design of the website, information security, simplicity of web pages and comfortability of web pages are very important.
**Facilitation of purchasing process** and reassuring customers that ordering via the web is secure and reliable and these things must be contained by the websites in many cases what Geissler, (2001) found in his survey. In our study we observed new findings, which are not in the theory. Grameen Phone website does not provide online ordering of products except few services but the information provided on the web and the website simplicity and reliability is facilitating the purchasing process offline. But the theory says that time saving payment method like online paying with multiple options, trusted intermediaries and telling the customers about security of payments and simple and comfortable web payment are some factors facilitate the purchasing process. In our case the website provides the information and customers purchase offline instead of online and considering all these factors we found something new in case one. The same situations found in the case two (Tata Indicom) with one more new additions. In this case if any online registered user decide to purchase a product then the company representative contacts immediately with the customer either by phone or by person. The only thing is to fulfill and sending the online application from. NetOnNet posses the positive image of facilitating the purchasing process being 100% internet store leading in Sweden.

**Quality and reliability of information** such as providing customers with ways to contact the company like e-mail addresses, toll free phone numbers, company’s offline contact etc. which are crucial aspects of any relationship via online (Geissler, 2001). Here GP’s website provides reliable online and offline contact address and offering branded products with global images and sharing global network it maintains the quality standard. This case supports the theory in these contexts. Tata Indicom supports the theory in the same way. NetOnNet website provides the security seal and company’s warehouse address in the net. It also offers multi branded products. Company’s annual report and award winning report from the princess of Sweden, these are the more factors made the information reliable provided on the net. Thus, the case supports the theory.

**Segmenting, targeting and positioning** (STP) are key activities that guide the development of relationship marketing strategy on the web, as in other media (Geissler, 2001). Effective positioning strategies are based on organizational commitments to create substantive value for the target consumer. Many designers feel that consumers are actively looking for information about specific products or services and marketers should not try to accommodate everyone in their website. Grameen Phone web site is targeted to the mobile phone customers and it is very simply and attractively positioned to the market. This case supports the theory. Tata Indicom allows too many segments and different positions targeted to voice, data and web conferencing sectors included mobile phone, overseas communication service, broadband internet service, ISDN service, virtual private networks, internet bandwidths, ADSL/DSL, TV uplink, voice and video conferencing. These factors regarding segmenting and targeting in the company’s website set a partial image relating to the theory. The website provides different links for few sectors like overseas communication and considering the overall position this case is partially in line with the theory. NetOnNet supports the theory being provider of pure internet shopping for home electronic products in Europe leading in Sweden.

**Usability and simplicity**
Geissler (2001) says that ordering online should be very simple, with only a few steps within purchase decision and order. Ordering should also be very secure for the consumers.
Chapter 6

How simple the online ordering process

Something new is found in this case because the website in this case does not provide online ordering except very few services like feedback from, online billing information, online customer queries and online bill payments through two selected banks and credit cards. Moreover, payments via banks and credit cards need pre-arrangements. The information provided on the web is helpful and simple for offline ordering process. Considering these situations the data sheds new light which is not in the theory. Tata Indicom also has the same service of getting bills and product ordering by filling up forms online but a customer cannot purchase any product online. So, it also introduces new findings as the same to the case one. NetOnNet supports this theory perfectly. The online ordering process on their website is very simple, requiring little information, trusted intermediaries and with few steps only.

Steps between purchase decision and order

Grameen Phone’s website describes few steps for purchasing offline only. The theory suggests that there should be very few steps between the purchase decision and ordering for the online customer. The empirical data tell us something new that is not in the theory. By the same way we found something new in case two which is absent in the theory. If a consumer is interested in purchasing, he puts his contact details and then the sales representative gets back to the customer via email or telephone. Net on net is perfectly in the line with the theory having very few steps between purchase decision and order.

How quickly it answers the questions

Grameen Phone supports this theory and its website provides well-defined and clear information for the consumers. Easy search option, pull down menu for quick links and its simplicity help the browsers to find out the necessary information. Tata Indicom and NetOnNet also support this theory in the same way.

Accessibility

According to Lilly (2001) understanding how inaccessible web pages create barriers to the optimal use of adaptive equipment in rendering web page information give developers a context in which to include accessibility elements within their pages. Grameen Phone does not support the theory. This is because they do not have any options for disabled. Screen magnifiers, speech input device, screen readers, voice browsers, mouth sticks access, captioning system with a player and speech recognition software are the adaptive technology an accessible web site should contain for being accessible. Case one completely not supports the theory. The same is the case for Tata Indicom and NetOnNet websites.

Degree of interactivity

According to Geissler (2001) providing customers with an easy means of navigating through a website is viewed as critical for facilitating interactivity. Consumers should be able to move quickly and efficiently within a site. Contact information or email link provides a vital link to the company.

Client relations

According to Geissler (2001) the websites serve as an information clearinghouse. Some clients want designers to organize their websites in a format similar to a company brochure. Some clients are interest in incorporating the web into their integrated marketing communications. Comparing the theory with empirical data Grameen supports the theory. Tata Indicom has a website which also supports the theory. NetOnNet also supports the same.
Feedback
According to Geissler (2001) companies attempt to gather personal information such as email addresses, street address, phone and fax numbers from consumers to establish and maintain direct contact with them and to provide information and updates to consumers. The website of Grameen Phone supports the theory. It provides the customer instant feedback such as, instant billing information online and the website also asks for little personal information that could be used for further feedback. Tata Indicom and NetOnNet also support this theory in the same way.

Customer service before, during and after the sale
Geissler (2001) found in his survey that effective website design ensures customer service before, during and after the sale. Grameen Phone’s homepage supports this theory as it provides these services and Tata Indicom does the same. NetOnNet also supports the theory. Its website allows customers to track the delivered items.

Security
Hilts (1997) found one of the most complexes tangled and emotionally charged issues regarding the internet these days is security. How safe is data that can be reached through the web, can it be made temper proof, can private information be kept private in cyberspace? Carole, A. lane (2000) says that merely shutting down access to all personal information files not only isn’t the solution, it maybe counter productive.

Private Information of consumers
Grameen Phone partially supports this theory. The website does not declare about the security and privacy of personal information customers provide online. But the website somewhere requires very few information like e-mail address and phone number from the customer which is vital for feed back. This way we found that it partially supports the theory. Tata Indicom supports this theory entirely by declaring the security issues under the ‘privacy statement’ link. NetOnNet states the security and privacy conditions on the web and also requires little personal information from customers. Thus, this case supports the theory.

Password control
Foo et al. (1999) says that users with login privileges should be made to choose good passwords. A poorly chosen password is likely to be gauged and used by unauthorized users. The website of Grameen Phone does not support this theory as it does not require any passwords for the users. Tata Indicom supports this since they have personalized accounts for consumer and they can choose their own passwords. NetOnNet supports this theory since they also provide personalized accounts with passwords.
Chapter 6

Cross-case Analysis:

In cross-case analysis we analysed the empirical data of the three cases in terms of theory under the research questions. As we mentioned earlier case one refers to Grameen Phone, case two refers to Tata Indicom and case three to NetOnNet respectively.

All the three cases are in line with the suggested theory about content of the websites where search capabilities and colour and size of characters are strongly maintained by each case. Case one and case three are not in the line having no site maps on their web pages. Case one partially supports the theory of use and size of images because it does not provide its product images on the web where other two cases support the theory by providing product images on the web. But we have observed that overall content of the websites for three cases are reasonably templated and are in the line with the suggested theory.

The sensory shopping experiences are not maintained on the three websites and only colour as a part of the sensory stimuli is supported and maintained by those sites. But the music on the websites was totally absent for each of the three cases. Lighting was partially supported by each case and we observed the overall view is negative for this part of the theories regarding sensory stimuli.

All the three cases support the theory regarding quality of design of websites providing quality and reliable information on the web. In case one and case two we have found new findings, which do not exist in the theory regarding facilitation of purchasing process. Both the cases do not handle with online purchasing but expedite the offline purchasing process. But case three perfectly supports all the theories under quality of design of web sites. It means the case three contains a quality website on the web. Overall, theories regarding the quality of design of website were supported by the cases.

We have found new findings in case one and case two regarding usability and simplicity theory and the both cases do not process online order. Information launched on their websites help customers to order offline simply and also help to maintain few steps between purchase decision and order. The finding is not in the theory. But case three supports these theories completely. In all the cases the websites answer the browsers’ questions quickly. But all the three cases do not support accessibility.

The websites were found interactive in terms of the theories related to degree of interactivity. All the three cases strongly support the theory being interactive with the browsers and also with customers by providing e-mail feedback, telephone hotlines, client relations and after sales services.

Under security theories case two and case three fully support the theory of information privacy and password control. But case one partially supports this theory for privacy and does not support at all for password control. Case three strongly supports the security theories. Overall the cases maintain security on the web.
6.2 How is customer service used strategically in online environment (RQ-2)?

**With-in case Analysis**

**Table 4:** Analysis of empirical data for R.Q-2 (Online customer service).

<table>
<thead>
<tr>
<th>Theories/Variables</th>
<th>Cases</th>
<th>Case one: Grameen Phone</th>
<th>Case two: Tata Indicom</th>
<th>Case three: NetOnNet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining effective customer support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing customers with more recent and adequate and faster information</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
<td>+/+</td>
</tr>
<tr>
<td>Providing product specifications</td>
<td>+/-</td>
<td>+/-</td>
<td>+/+</td>
<td>+/+</td>
</tr>
<tr>
<td>Automated e-mails, instant messaging and web call back</td>
<td>+/-</td>
<td>-/-</td>
<td>-/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Promises of services</td>
<td>+/-</td>
<td>+/-</td>
<td>+/+</td>
<td>+/+</td>
</tr>
<tr>
<td>Encouraging</td>
<td>+/-</td>
<td>+/-</td>
<td>+/+</td>
<td>+/+</td>
</tr>
<tr>
<td>Telephone help lines</td>
<td>+/-</td>
<td>-/+</td>
<td>-/+</td>
<td>+/-</td>
</tr>
</tbody>
</table>

**Source:** Author’s own construction

**Measurement tool:**

+/- = Support the theory, positive
-/+ = Partially support the theory, neither positive nor negative (neutral)
+/- = Found new in the case but not in the theory
-/- = Not support the theory, negative

**Maintaining effective customer support**

*Providing customers with more recent and adequate and faster information*

Singh *et al.*, (2001) suggests that a company that can respond to the needs of customers, accommodate their requests promptly and support their buying decisions creates value and wins customer patronage. Grameen Phone’s website keeps the latest and updated information. The product and services information provided on the web is very adequate. This case supports the theory. Tata Indicom also updates their website with the latest information and news regarding their products. NetOnNet is similar to both the previous company websites and updates information on a regular basis. This case also supports the theory.

*Providing product specifications*

Turban *et al.*, (2000) suggests that online services such as easy search of products and services, provision of product specifications that reduce communication costs, secure electronic payment systems to complete transactions, updated product delivery information and quick responses to customer queries are important to win online customers and to make them keep coming back to the site for further purchases. The homepage of Grameen Phone describe their product specifications very clearly. The website of Tata Indicom not only provides the text version of their products but a picture of the product as well. Hence, the customer clearly knows what he is buying. The website of NetonNet also describes their products very concisely and the customer gets a clear idea of the product he wants to buy. These cases are in the line with the theory.

*Automated e-mails, instant messaging and web call back*

According to (Judith, N., 2000), automated e-mail, instant messaging and web callback are adapted by a growing number of e-retailers to respond ever-expanding customers demand. Grameen Phone’s website has does not have automated emails and web call back but it has general e-mail contact and hotline contact number. Its website has instant messaging system
for customers billing information. This case partially supports the theory. The website of Tata Indicom also has an online enquiry to the customer care centre but no automated emails, instant messaging or web-callback and so the case is not in the line with the theory. The same is the case for NetOnNet, which has a general e-mail enquiry and telephone contact. Thus, the case does not support the theory.

**Promises of services**
Claycomb (2002) says that customers generally do not purchase services, but promise of services. A strong, healthy relationship between customers and services providers engenders the trust that is necessary for customer to commit to the service. Grameen Phone provides the promises of various distinct services. The case supports the theory. Tata Indicom also promises various services on its homepage. NetOnNet promises two years of guarantee for almost all its products and some for one year on its homepage. The two cases are in the line with the theory.

**Encouraging**
According to Claycomb(2002), learning what service providers’ specific objectives are for ‘building customer relationship’ provides some indication of what the phrase means to them, and leads to potentially valuable insights as to their motivations for doing what they do to build customer relationships. To encourage customers to think of the sellers first when considering a purchase, provide better service to the customers, encourage customers to speak favorable about seller, encourage customers to trust, encourage customers to enjoy doing business with the sellers, adding the value to what the customers receive from the sellers and encourage the customers to refer prospective customers to sellers. The encouraging activities on Grameen Phone website were user forum, newsletters and SMS shortcuts, community works, sponsoring cricket teams, organizing various package programs and competitions. This case supports the theory. Tata Indicom provides many encouraging activities such as media room, special packages and schemes and personalized accounts. This case is in the line with theory. The encouraging activities on the NetOnNet are online membership, company awarding information and promising of cheapest price on the net. This case here supports the theory.

**Telephone Help Lines**
According to Claycomb (2002) many of the personal interviews revealed a more generalized interest in building additional value in the service on a day-to-day basis for example, telephone help lines. In our study we have found that all three cases support this theory partially since they do offer this service but it is not toll free.

**Cross-case Analysis**
All the three cases strongly support that customers should be provided with adequate, faster and very recent information and also product specifications on the web. The cases provide encouragement to get the customers back not only to the web but also to the company. Grameen Phone and NetOnNet support the theory whereas Tata Indicom also supports it completely since they offer various special offers and schemes for the customers on their website. In case of automated e-mails, instant messaging and web call back the case one supports the theory partially and case two and case three do not support the theory. Case one provides instant billing message online but not automated e-mails or web call-back. The other two cases do not have the instant or automated messaging system on the web. But all the three
cases provide e-mail, phone, and fax and hotline contacts for the customers. However the phone lines are not toll-free. All the three cases promise very good services by the web. All the three partially support the theory of telephone help lines since they do offer this service but it is not toll free. The theories under maintaining effective customer support are overly supported by the cases.

6.3 How can the process of building trust be described (RQ-3)?

**With-in case Analysis**

Table 5: Empirical data analysis for R.Q-3 (Process of building trust).

<table>
<thead>
<tr>
<th>Theories/Variables</th>
<th>Case one/ Grameen Phone</th>
<th>Case two/ Tata Indicom</th>
<th>Case three/ NetOnNet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appeal of the web sites</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Quality of product and services</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Order fulfillment</td>
<td>-/+</td>
<td>-/+</td>
<td>+/-</td>
</tr>
<tr>
<td>Trusted third party</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
</tbody>
</table>

**Source:** Author’s own construction

Measurement tool:
+/- = Support the theory, positive.
-/+ = Partially support, neither positive nor negative (neutral)
+/- = Found new in the case but not in the theory.
-/- = Not support the theory, negative.

**Appeal of the web sites**

According to Srinivasan (2004), appeal of web sites, product or service offerings, branding, quality of service and trusted seal are important in gaining consumer trust. Grameen Phone has a website which is very positive appealing and has service oriented attitude that is related to the consumer. The case is in line with the theory. Tata Indicom’s website is positively imaged in the same terms as it is very interactive and offers personalized service. The website is easy to browse and look attractive because of the colour and background. This way it supports the theory. The website of NetOnNet contains customer related and positive appeal. Considering the empirical data it supports the theory.

**Quality of product and services**

Singh *et al.*, (2001) suggest that effective customer support and services are vital to encourage customers to shop online. Archer and Gabauer (2000) emphasizes that building and maintaining customer relationships are the key to success in e-commerce, which depends on maintaining effective customer service. The website of Grameen Phone offers a wide variety of information which is very comprehensive about its product and services. It offers branded products and shares the international networks. The case supports the theory. Tata Indicom’s website also offers wide and varied but quality information explained in a lucid manner. Providing branded product and multinational networking the case here in line with the theory. The website of NetOnNet also offers comprehensive information and it is easy to measure the quality and reliability of products and services while surfing the web pages. This case perfectly supports the theory.
Order fulfillment
According to Dayal et al., (1999), Order fulfillment is another requirement for trust building because customers want to place orders and get merchandise efficiently and with minimal hassles. Lack of clarity about actual cost is a big negative. The best practice is to explain all costs and have an infrastructure that gets the right product of the right buyer in a reasonable period. The website of Grameen Phone does not offer any online ordering facility. But it clearly states the total cost of the product before buying offline. The same is the case for Tata Indicom and it does not offer any online ordering facility as well. The site provides product details with images of the products which is very clearly help customers to get an idea and thus, this case partially supports the theory. NetOnNet is capable of handling and processing easy ordering process and the product is deliverable just after the payment. Since the site is for pure internet shopping it contains total cost stating beside the each product. The case is perfectly in the line with theory.

Trusted third party
Srinivasan (2004) says that many online businesses are unknown to consumers. Yet, they have an interest in doing business with the online company because the product or service is beneficial to the customer. The primary role of the trusted third parties is to act as intermediaries between several merchants and a whole lot of customers spread all over the world. In case one, the website tells the browser that it deals with internationally trusted agencies/parties like Standard Chartered Bank, HSBC bank and ATM/ credit cards. The company shares its mobile network globally. Considering these factors the case supports the theory. The website tells the browser that it deals with selected banks and ATM/credit cards in the Tata Indicom homepage. They operate with global brands and image. The website of NetOnNet contains the security seal for online payment and payable by VISA and Master Card, SEB or Nordea Bank or via Handles Bank credit system and all those internationally branded parties. The two cases here support the theory.

Cross-case Analysis
Theories related to the process of building trust are supported by the three cases here overly. All the three cases sell the quality product and services and also global brands. Appeal of the websites of these three cases is positive towards the customers. Customers can easily get the product information and guess what the site really deals with. Grameen Phone and Tata Indicom websites partially support the theory of order fulfilment since they do not offer online ordering facilities except services like online queries and paying bills online. The order fulfilment theory is partially maintained by the case one and case two. Actual cost of the product is not mentioned on the Tata India’s web site but it is on the Grameen Phone’s web site. The product image and specification is on the Tata Indicom’s web site but not in the Grameen Phone’s web site. Thus, these two cases partially support the theory. The case three perfectly maintains the process of building trust according to the theories. All the three cases support the theory of trusted third party and those parties have recognition worldwide and also affiliations with various world-renowned banks and companies.
Chapter 7

7 Conclusions and Recommendations

This last chapter is about the findings and conclusions comparing the theory and empirical data those analysed in chapter six. We have presented the summary of data analysis found in this study. This is followed by recommendations for theory, management and future research.

7.1 How can the online environment (website contents, design, etc.) be described?

From our observation we have found that the easiest way to be reliable and trusted to the customers is to maintain an easy and simple image in online environment. This can be done by having rich content, easily accessible information and having a design that facilitates multiple audiences. In all the three cases, the websites have followed this rule of having a simple environment, proving comprehensive information and having rich content. The main objective of these websites has been to provide lucid information, which motivates the customers to purchase services and products. Our findings also indicate that apart from the content of the websites sensory stimuli, quality and design of the web pages, usability and simplicity, degree of interactivity and security are some issues companies should be careful considering online environment. Our selected theories recommend maintaining positivism regarding these factors in online environment. However we have observed that most of our cases still maintain these factors in line with the theories. It was impossible for our observed companies to maintain all the points because of technological, infrastructural, economic and awareness factors. For example, low internet speed and penetration in Bangladesh and India hamper the interactivity and connectivity among companies and financial institutions.

Considering all above-mentioned situations we made the following conclusions regarding our RQ-1, online environment:

♦ Website contents play an important role in online environment, which are tonic for attracting and reaching customers.
♦ An effective search engine takes the browsers to the distinctive position of the company and its product.
♦ Size, use and colour of images and characters are also important to be reasonable and sustained on international cultural aspects.
♦ Sensory stimuli or sensory shopping experiences are not maintained by most of the cases in our study but according to theory it is something that make the customers sustain on the web.
♦ Website design and its quality are important in terms of reliability, targeting and facilitating purchasing process.
♦ Usability and simplicity of web pages is valuable in the online environment.
♦ Simple ordering process, few steps between purchase decision and order, quick answering ability and accessibility are considered important while consumers shop online.
♦ We have found our cases perfectly interactive. Client relations, feedback and customer service before-during-and-after sale these are considered most interactive parts in the online environment.
♦ Security and privacy of information are key areas the company should emphasize on.
7.2 How is customer service used strategically in online environment?

We have observed that providing customers with more recent and adequate information is very important issue. Adequate information presented in a clear and simple manner helps the customer to make decisions quickly and it supports their buying decisions to a great extent. It not only creates value for the customer but also improves sustainability and loyalty of the customer. The empirical data indicates that the websites should provide product specifications clearly so that customers know what exactly they are buying. Another key factor in the customer service is how the companies get back to their customers. By providing automated e-mail messages or web call back the company can exceed the expectations of their customers. One of the marketing strategies used by the companies on the web has been promising of services to its customers. Customers generally do not purchase services, but promise of services. To build up trust and relationship between the company and its customers the companies should not only promise services but fulfil them as well. Websites also offer user forum, media room and newsletters to encourage customers to visit more frequently and sometimes entice them in buying their products. To keep more personal touch with the customers, it is also important for the companies to have toll-free telephone help line numbers on their websites.

Having discussed the second research question, we have drawn some specific conclusions, which are given below:

♦ The companies in this study seem to believe in the fact that customer service is one of the most crucial factors in maintaining customer retention and attracting new customers.
♦ Providing updates and keeping the customer regularly informed about the products and services also play a very important role for company and customer relationship.
♦ Instant messaging services and toll-free telephone help lines provide acceptable services for the customers but still marketers are not utilizing the maximum potential of these services.
♦ Encouraging activities such as holiday package, personalized accounts, user forums, value added packages, sponsoring offers and community activities help to build customer relations.

7.3 How can the process of building trust be described?

We have observed that the websites of the companies should have appeal to different kinds of customers and provide quality services to gain trust. Any website which is appealing and has service oriented attitude would definitely help to gain consumer trust. The empirical data indicates that trust is an ongoing process. Once the customer orders something online, the companies should make sure to fulfil its promise of delivering in time and provide after sales support, since customer support and services are vital to encourage customers to shop online. This has been implemented in the cases of our study. Based on the theory and our findings we have observed that the role of trusted third party cannot be undermined in companies’ websites. The presence of third parties or the connection between the companies with other known organizations automatically generates a feeling of trust amongst the online shoppers. All the cases in our study have been observed that trusted third parties and their existence is a vital part in generating trust. After having discussed the third research question, we have drawn some specific conclusions, which are given in the next page.
The websites should be appealing to the consumers and should create the interest of various kinds of customers. All the three websites of our study have put an effort keeping their website easy to browse and user friendly.

It is very important to mention the actual cost of products and the security of transaction process on the web.

The role of trusted third parties should not be undermined in online business. Trust is built in a step-by-step manner and is an ongoing process. From the attractive-easy- and-simple web environment, effective and instant customer service and website appeal to product and service quality, order fulfilment and eventually the third parties role build the trust process.

The online marketers can easily set the trust building process as the denominator for long-term profit making objectives and sustainability in the market.

### 7.4 Recommendations

#### Recommendations for Management

Based on our study and the knowledge gained in the process of our thesis we would like to give some recommendations to the management:

- Trust plays a key role in attracting and retaining customers. Hence, companies should have websites that are user friendly and rich in content, which give the customers a sense of security and feeling of trust and satisfaction.
- The companies should use knowledge management to streamline the operations of their websites.
- The use of feedback is very important for online customer service. Automated e-mail and instant messages should be used more extensively than it is at present.
- Customers should be encouraged by providing them with various e-commerce solutions like online shopping carts and SSL technologies for secured transactions.
- Trust and online customer service of companies’ websites will play a key role in determining their success in the e-commerce world.

#### Recommendations for Theory

The theories presented in this study have various aspects of consumer trust, online environment, website designs, security, quality and reliability of websites and the information they provide. We have also addressed the importance of online customer service and its impact on consumer trust. The trust pyramid theory discussed in the background chapter laid the foundation of our research. Our research highlights the importance of building trust in the online environment with the process of customer service. The contribution to theory of this thesis is based on empirical data and information from three websites regarding our research questions. Three case studies have given us intensive understanding on the area of our research.
Chapter 7

Recommendations for Future Research

Our research highlights the importance of building trust in the online environment along with the customer service, which is vital in online environment. It gives a deep insight of the importance of this particular area and further scope for research in the future. A more comprehensive study could be conducted further considering the following points:

- Further study could be conducted on the online environment factors because websites act as the primary contact with the customers.
- It would further be interesting to conduct research on online customer service.
- Further research would be conducted including more samples to develop the understanding in greater sense.
- K-commerce could be included considering effective customer service for further research.
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Judith. N., (2000). E-retail customer service: it’s more than just e-mail, InformationWeek, issue-805.


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References

Grameen Foundations USA - http://www.gfusa.org/ (last visited March 5, 2005)


Home page observed for three cases:

www.grameenphone.com (Last visited March 9, 2005)

www.netonnet.se (Last visited March 9, 2005)

www.tataindicom.com (Last visited March 9, 2005)
Appendix A: Observation Checklist

We have observed the websites of our three cases; one is www.grameenphone.com then www.tataindiccom.com and lastly www.netonnet.se. We intended to perform the observation from the following perspectives on the companies’ homepages where the three RQs were main directions and we have listed here the concepts and theories we relied on.

Company Name:
Company Business:
Product and Services offered by the company:
Online activity of the company:

### RQ 1. Online Environment

<table>
<thead>
<tr>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ Search capabilities (Perry and Bodkin, 2000)</td>
</tr>
<tr>
<td>♦ Site maps (Perry and Bodkin, 2000)</td>
</tr>
<tr>
<td>♦ Use and size of images (Kaplan et al., 1998)</td>
</tr>
<tr>
<td>♦ Colour and size of characters (Kaplan et al., 1998)</td>
</tr>
<tr>
<td><strong>Sensory stimuli</strong></td>
</tr>
<tr>
<td>♦ Music (Herrington and Louis, 1994)</td>
</tr>
<tr>
<td>♦ Colour (Herrington and Louis, 1994)</td>
</tr>
<tr>
<td>♦ Lighting (Herrington and Louis, 1994)</td>
</tr>
<tr>
<td><strong>Quality design of website</strong></td>
</tr>
<tr>
<td>♦ Facilitation of purchasing process (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Quality and reliability of information (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Segmenting, targeting and positioning (Geissler, 2001)</td>
</tr>
<tr>
<td><strong>Usability and simplicity</strong></td>
</tr>
<tr>
<td>♦ How simple the online ordering process (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Steps between purchase decision and order (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ How quickly it answers the questions (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Accessibility (Lilly, 2001)</td>
</tr>
<tr>
<td><strong>Degree of interactivity</strong></td>
</tr>
<tr>
<td>♦ Client relations (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Feedback (Geissler, 2001)</td>
</tr>
<tr>
<td>♦ Customer service before, during and after the sale (Geissler, 2001)</td>
</tr>
<tr>
<td><strong>Security</strong></td>
</tr>
<tr>
<td>♦ Private Information of consumers (Carole A. Lane, 2000; Hilts, 1997)</td>
</tr>
<tr>
<td>♦ Pass word control (Foo et al., 1999)</td>
</tr>
</tbody>
</table>

### RQ 2. Online Customer Service

**Maintaining effective customer support**
- Providing customers with more recent, adequate and faster information (Singh et al., 2001)
- Providing product specifications (Turban et al., 2000)
- Automated e-mails, instant messaging and web call back (Judith, N., 2000)
- Promises of services (Claycomb, 2002)
- Encouraging (Claycomb, 2002)
- Telephone help lines (Claycomb, 2002)

### RQ 3. Process of building trust

- Appeal of the web sites (Srinivasan, 2004)
- Quality of product and services (Srinivasan, 2004)
- Order fulfilment (Dayal et al., 1999)
- Trusted third party (Srinivasan, 2004)
Appendices

Appendix B

The above screen shot is the feedback form provided by the Grameen Phone (case 1). The feedback form was filled up and sent on Saturday 27th February, 2005, 12.02 pm Western Europe standard time.
Appendix B-1

The screen shot is the message of successfully sending the form.
Appendix B-2

This screen shot shows the feedback sent from Grameen Phone on February 28th, 2005.
Appendix C

This screen shot shows the online of insta-bill service provided by the Grameen Phone. The quickest online customer service.
This screenshot is about the online customer service by e-mail of Net On Net (case three). The e-mail was sent on March 1, 2005 and reply received by March 2, 2005.