Building Trust over the Internet:

Design and Prototype of an Advocacy Website

by

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Submitted to the Department of Electrical Engineering and Computer Science

in Partial Fulfillment of the Requirements for the Degree of

Master of Engineering in Electrical Engineering and Computer Science

at the Massachusetts Institute of Technology

[June 2004]

May 20, 2004

Author_____

Department of Electrical Engineering and Computer Science
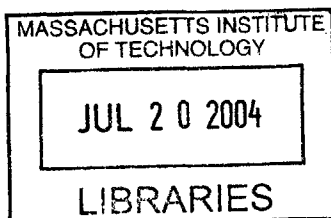
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Abstract

The Internet has empowered consumers with information, options, and a simple mechanism for transaction. Although the Internet has not completely replaced traditional shopping methods, it has brought about a change in the balance of power between suppliers and consumers. Many suppliers have responded to this change by adapting their marketing strategies from traditional push-based practices to more consumer centered trusted-based methodologies. In the wireless industry, Qwest Communications International, Inc. has taken a leading step in building consumer trust through the development of an advocacy website to help consumers select the best service packages available to them. In collaboration with Qwest, the MIT e-business Center has designed and implemented a functional prototype, My Wireless Advocate [1], that includes both successful advice-based features and innovative advocacy-based features such as retro-active pricing strategies and creating your own wireless plans. A preliminary focus group study has shown that consumers are ready for more trust-based business models in the online wireless industry, and that the Qwest project is definitely a step in the right direction. It is clear that once the major trust busters are fixed and the website is completed to a production level, it will be very useful and attractive for consumers, and raise general consumer awareness and trust toward Qwest.

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Acknowledgements

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Chapter 1

Introduction

The growing popularity of the Internet has created a paradigm shift in the balance of power between consumers and suppliers. Consumers have the ability to make more informed buying decisions for themselves through increased access to accurate and timely information about suppliers' products and quality of service. Meanwhile, growing consumer power and growing competition from both at home and abroad are limiting suppliers' ability to practice traditional push-based marketing focused on targeted promotions and price discriminations. In response, many companies are turning to a trust-based marketing approach by providing customers with open, honest, and complete information and advice. Some companies have taken the consumer advocacy idea further by finding the best products for their customers, even if those offerings are from their competitors. These approaches have shown initial success in building consumer trust in the companies, however their applicability and mechanisms are still in the early stages of development.

The objective of this thesis was to determine the applicability of various levels of consumer advocacy on the World Wide Web, with a specific focus on the wireless communications industry. This was accomplished through an MIT research initiative in collaboration with Qwest Communications International, Inc., a wireless service provider. The purpose of this initiative was to jointly develop advocacy-profiling and

trust-evaluation techniques through the design, implementation, and testing of a prototype consumer advocacy website, *My Wireless Advocate*.

This thesis first provides an overview of trust-based marketing and the current growth in consumer power. It then extends to a discussion of the relevance of a trust-based consumer advocacy approach to Qwest and the wireless communications industry. This is followed by a review of the current presence of advice and advocacy on the Internet, including an analysis of the important and innovative features that have made these web applications successful. From there, this thesis narrows in on the design and implementation of a customized website for the purpose of this research, and discusses the procedure and results from a preliminary focus group study. Finally, this thesis addresses the key issues found in the study, suggests improvements to the existing prototype based on these findings, and concludes with future research ideas and possible enhancements to the project.

Chapter 2

Background

This chapter describes the fundamental ideas behind trust and consumer advocacy. First, it presents the concept of the "trust dimension", and the elements in building a trust-based business model. It then moves on to discuss the shift in marketing strategies from traditional push tactics to more innovative advocacy tactics through review of existing literature. Finally, it relates consumer advocacy concepts to the wireless industry and summarizes the motivation behind this research project.

2.1 Trust

"Trust is the key in an advocacy strategy." [2] The trust dimension is a spectrum of the different levels of trust a customer can have in a business. Trust influences the actions taken by consumers, as well as their overall attitude towards a company. In order for a company to become trustworthy in the eyes of its customers, it has to take steps to achieve a trust-based relationship with its customers. This section discusses three marketing strategies that fall on different levels of the trust dimension and the inevitable shift towards consumer advocacy.

2.1.1 Push-Based Marketing

Pure push marketing practice, which is not dependant on trust, exists at one extreme of the trust dimension. In a push-based business model, a company benefits in the short run

by taking advantage of information imbalance, capitalizing on consumers that are not fully informed about the product features and services. The goal is to get as many sales as possible, especially sales of high-margin items, through the use of flashy media advertising, aggressive promotions, and one-sided communication that may mislead customers [2]. Marketing departments are quicker to respond to new forms of information media than the average consumer. Companies can take advantage of this situation by manipulating consumers' perceptions of value through deals and promotions instead of offering high quality products and services. Push-based marketing aims to extract the maximum revenue from each customer by isolating customers and delaying the spread of information. Fulfillment and after-sale support tend to be minimal and very cost-oriented [3].

Push-based business tactics have been at the core of marketing for the last 50 years. However, with the wide spread of the Internet and growing accessibility to information, consumers are no longer limited to one-sided information from newspaper and television advertisements. In fact, these traditional marketing tactics are now being viewed as annoyances to those who seek helpful information. Eventually, consumers will gain access to the information they need to make better judgments, and the push-based seller's marketing efforts will be offset by consumer knowledge [3]. In recent years, a number of companies have responded to this situation by building better products and emphasizing service to increase customer satisfaction. This has led to the development of a new business model that is based on building partial trust and places strong emphasis on customer relationships.

2.1.2 Relationship Marketing

Relationship marketing is a business model that provides partial trust to the consumers, and therefore falls in the middle of the trust dimension. As the name suggests, a company that practices relationship marketing will try to build a relationship with its customers by increasing consumer satisfaction through better products and quality of services. Such a company worries about not only acquiring new customers, but also retaining their existing customer base. In order to achieve this goal, the company must have adequate fulfillment and support services that deliver the promised value to its customers. Backed by Customer Relationship Management (CRM) and one-to-one marketing concepts, a partial trust-based company targets consumers better and is more effective in delivering persuasive information and personalized promotions.

Relationship marketing provides companies with some competitive advantage through targeted offerings and better quality of service. These companies will provide extensive and honest information about their own products and services, although not necessarily comparisons to competing products. Most CRM programs are based on building a data warehouse, mining the data, and then hitting the identified segments with aggressive email, phone, and Internet promotions with or without customers' permissions [2]. But even relationship marketing has begun to lose its effectiveness due to the shift in consumer power. "People are more educated and informed than ever, and they have the tools to verify a company's claims and seek out superior alternatives from competitors [4]." This shift in power has led innovative companies to try out a more open and honest approach to establishing a dialogue with their customers, in order to learn and advocate

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for their needs. The assumption is that those customers will then reciprocate with their trust and enduring loyalty, leading to growth in sales and profits for the company [4].

2.1.3 Consumer Advocacy

Consumer Advocacy, a fully trust-based strategy, exists at the opposite end of the trust dimension from traditional push-based marketing strategies. A fully trust-based business aims to build long-term relationships with its customers by truly representing their interests. A company that adopts this strategy will act on behalf of its customers even at the expense of its own short-term interests, for instance by recommending a competitor's product when it is the better choice. In certain ways, push-based marketing assumes that customers are passive individuals who must be coerced into buying. Advocacy is a major step forward in evolving the relationship between companies and their customers, in that it treats customers like intelligent individuals who seek to make informed decisions about the goods and services they purchase [4].

Consumer advocacy lays the foundation for a mutually beneficial relationship between consumers and companies. On one hand, this partnership provides the consumer with a trusted source of high quality products and information, thus reducing the amount of time spent shopping around and eliminating the risk of being scammed. On the other hand, customers can act as delegates for the trusted company by telling others about their positive experiences, and thus significantly reducing the cost of customer acquisition to the company. In return, the money saved from heavy promotions and untargeted marketing can go toward further increasing the quality of products and services to benefit

the consumers. In summary, it is assumed that if the company advocates for it customers, then those customers will reciprocate with their trust, purchases, and enduring loyalty to the company.

A successful consumer advocacy strategy does not stand on its own; it requires a solid base of customer orientation as shown in Figure 1. A quality management program is essential; without top quality products, a company trying to represent its customers' interests will not be able to honestly recommend its own products. Therefore, high quality products and satisfied customers lay the foundation of the advocacy pyramid. Relationship management builds on these, by developing a relationship with and learning from satisfied customers. This all supports consumer advocacy, allowing a company to be successful through being a trusted advocate of its customers [4].

Figure 1: The Consumer Advocacy Pyramid

There are eight key elements to consider in developing an advocacy strategy to achieve trustworthiness in the eyes of consumers. The eight elements and their brief descriptions are summarized below in Table 1.

Element Name	Element Description
Transparency	Company supplies consumers with honest and open information, enabling consumers to easily choose among different options.
Quality of Products	Company has to offer high quality products and services, in order to honestly recommend their own products and find what is best for its customers.
Product Comparison	Company is willing to inform prospective customers about alternatives and competitors' offerings.
Alignment of Incentives	Company maintains mutually beneficial and long-term relationships with its customers to avoid biased advice (e.g., no commission for recommending one product over another).
Partnering	Company partners with their customers to learn from consumer needs and educate consumers to make more informed decisions.
Cooperative Design	Company relies on customers for valuable information and design ideas to collaboratively create the next generation of products.
Supply Chain	Company partners only with other trustworthy businesses in their supply chain.
Comprehensiveness	Company involves the entire organization in achieving the goal of consumer advocacy.

Table 1: Eight Elements of Consumer Advocacy

2.2 The Shift Towards Advocacy

The Internet has empowered consumers with information, options, and a simple mechanism for commercial transaction. Although the Internet has not entirely replaced traditional shopping methods, it has brought about a change in the balance of power between suppliers and consumers. This section first examines the trend in consumer power and the motivation for companies to become more trustworthy. Then, it discusses the applicability of consumer advocacy in the real world through the idea of letting consumers convince themselves. Finally, this section summarizes the industrial and environmental requirements necessary for the success of an advocacy strategy.

2.2.1 Trend in Consumer Power

Thanks to the immense proliferation of the Internet and the World Wide Web, vast amount of information about products and services from various independent sources are now easily accessible. Consumers have become smarter shoppers by fully utilizing the Web to learn more about their products of interest before purchase. For example, 60% of car buyers now use the Web to research models, features and prices, visiting an average of seven different websites [4]. Another great advantage of the Web is that it reduces the search cost for consumers to find competing products. Many websites are designed to provide consumers with a quick and easy means of doing comparison-shopping and finding the best products at the lowest costs. For example, companies such as Travelocity, Orbitz and Expedia have revolutionized the travel industry by helping people find the lowest fares on flights across all major airlines. A large part of the success of these websites should be contributed to their simplification of transactions between

consumers and providers. Customers can now connect directly with the providers of goods and services, thus greatly cutting the cost of middlemen and commission fees [4].

Furthermore, the Internet acts as a great communications medium that facilitates information exchange among customers. Specifically, websites like epinions.com and Amazon.com allow consumers to share information and experiences regarding various products and services. Consumers are not only able to learn from others the innovations and interesting features associated with a particular product, but they are also able to gain insights regarding the quality and service guarantees to help them avoid dishonest advertising and sales ploys.

Additionally, consumers today are much harder to reach and far harder to sway through traditional push-based marketing schemes such as telemarketing, national broadcast TV commercials, and local newspaper advertisements. Research has shown that 50 million people recently signed up for "no-call" protection against telemarketers, 64% of consumers are furious about pop-up ads, prime-time audience for the three national broadcast networks has dropped 50% since 1970, and two-thirds of viewers routinely mute their TV or switch channels during commercials [4].

The Internet has significantly altered the way companies must relate to their customers and react to their competitors. Most industries have felt the impact of the Internet to some degree, and while the reactions have varied somewhat, the premise is the same: Companies' strategies must become more customer-centric, in order to appeal to

educated and informed consumers. The emergence of empowered customers means that companies no longer necessarily have the upper hand. They must now rely on building trust-based relationships with customers in order to capture and retain their business [3].

2.2.2 Letting Consumers Convince Themselves

The increase in consumer power is dramatically reducing the reach and effectiveness of traditional push based marketing practices. In the current market, consumers tend to dislike being pressured into buying products, and most despise annoying sales pitches and flashy advertisements. Instead of assuming that customers are passive individuals who must be coerced into buying, many advocacy-oriented companies are now treating customers like intelligent individuals who seek to make informed decisions about the goods and services they purchase. Consumer advocacy oriented companies are working to devise media and methods that empower people to compare products, make sophisticated choices, and convince themselves. These companies are realizing that persuading potential customers that their products are indispensable is one thing; getting their customers to persuade themselves of that fact is quite another [5].

Most people develop trust based on positive past experiences [6]. By allowing potential customers to taste, sample, and play with new technologies before their purchase, companies can greatly reduce customers' natural (or acquired) resistance to innovation and allow the customers choose how they want to be persuaded. Giving consumers the opportunity to play with the possibilities not only gives them a feeling of reduced risk, but also serves as an effective sales tool. It creates conversations and collaborations

between customers and vendors that would never take place otherwise, while making the

consumers feel that they have made the best decision.

2.2.3   Requirements for an Advocacy Strategy

Even though the Internet has had great impact on the way businesses now operate, there

are still alternatives to trust-based marketing. Various factors in competitive situations,

environment and operating conditions, as well as customer characteristics might prevent a

company from pursuing an advocacy strategy. Consumer advocacy strategies usually

focus on long-term returns, and thus could give up short-term profits in exchange.

Therefore, if short-run results are most important and the emphasis is not on long-term

outlook and return on investment, then advocacy may not be useful [4]. Table 2

describes the attributes that are needed for a trust-based strategy, and attributes that might

make a trust-based strategy less successful.

Attributes Important to Trust Marketing	Attributes for Alternative Strategies
• Products are complex and differentiated • Products require high customer involvement • Customers face a risk of loss if they do not select the right product • Many alternative products exist • Large amounts of information are available	• Products are undifferentiated, highly standardized commodities • Products require very little customer involvement • Customers are price and deal prone • Company holds a monopoly position

Table 2: Attributes Comparison for Trust-Based vs. Alternative Marketing

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2.3 Advocacy in the Wireless Industry

Many firms sell products that fit the attribute designation of advocacy as described in the previous section and currently have relationship programs, so it is natural for them to migrate to the advocacy side of the trust dimension in response to increasing levels of consumer power. However, the telecommunications industry has traditionally relied heavily on push strategies due to regional monopolies. With the emergence of wireless communications technology and increased competition, telecommunications firms are also starting to look into more innovative ways of managing their products and services. The following section analyzes the motivation behind a shift in paradigm in the wireless communications industry, and the feasibility of moving firms directly from a push positioning to consumer advocacy on the opposite end of the trust dimension. Then, the section will focus on Qwest Communications as a case study of an advocacy-based approach in the wireless communications industry, leading to the discussion of the purpose and goals of this research project.

2.3.1 Increased Competition in the Wireless Industry

There are four Regional Bell Operating Companies (RBOCs): Verizon Communications that provides the widest US coverage although originally based in the Northeast, BellSouth that dominates the Southeast, SBC Communications that primarily services the Midwest, and Qwest Communications that covers the Rocky Mountains and Northwest regions. These companies still dominate local phone services and largely control the rollout of broadband Internet access via DSL (digital subscriber lines). Meanwhile, nationwide long distance providers AT&T, MCI, and Sprint have been entering new lines

of business such as local phone services, wireless services, Internet access, and digital television [7].

It was often argued that RBOCs could afford to offer sub-par service levels due to the captive nature of their local service customer base. However, in 1996, Congress passed the Telecommunication Act in an effort to stimulate competition in the industry by opening up local networks to increased competition. This allowed traditional long distance providers like AT&T to move into the local markets, offering compelling bundled phone packages to end customers. In addition, local carriers (after receiving approval from the FCC) can now offer long-distance and other services.

The increase in competition has pushed some of these firms to reconsider their business goals and experiment with more innovative ways of marketing their products that are closer to the consumer advocacy end of the trust dimension. In fact, the characteristics of the wireless industry matches rather well with the attributes needed for success in an advocacy strategy. Wireless products have very complex fee structures due to variations in the numerous existing features (e.g., minutes, roaming, long distance, etc.) and the new features that companies are rolling out to differentiate their products (e.g., rollover minutes, vision plans, text messaging, etc.). It is very rare that you would find two wireless plans that offer the exact same set of features and options. Many alternative carriers and products exist in the wireless market, and consumers have a very difficult time making the right choice. One bad decision can lead to a bombardment of cryptic service charges such as off network fees, over usage fees, and termination fees. In this

highly competitive market, consumers are increasingly attracted to honesty – a straight deal – as a differentiator in choosing a provider.

2.3.2 In Praise of Honest Pricing

In today's market, the wireless industry provides a striking example of hidden pricing. The conventional industry wisdom is that such push-based tactics are a good idea; after all, they allow companies to boost profits behind the false pretence of competitive pricing. Consider a typical offer from Sprint PCS for 4,000 calling minutes for $39.99 per month. At first glance, the cost would seem to be a penny per minute. The catch is that only 350 of those minutes are "anytime"; the other 3,650 minutes are restricted to night and weekend usage [8]. Moreover, the copious fine prints states that there is a $36 activation fee, $150 early termination fee, and 50 cents per minute for usage off the company's network, which covers only 80 percent of the United States [2]. If subscribers go over their allotted time on either segment, they are charged 35 cents per minute, and unused minutes from the month are forfeited. What starts off looking like a penny per minute turns into 11 to 20 cents per minute because of the natural variability in usage. Telecommunications companies have the statistics on what everyone is paying and which plan makes the most sense for a given consumer, but they are not sharing that information with consumers [8].

What the companies fail to realize is that hidden pricing is harmful not only for consumers who cannot figure out what something really costs, but also for the businesses that engage in it due to massive turn over rates. Customers change carriers as soon as

better deals come along, and the acquisition cost for each new customer can be up to $250. Topping 40% per year, the customer "churn" over rate in the wireless industry presents a very serious problem to the telecommunications companies [8]. To make matters worse, a U.S. Federal Communications Commission (FCC) mandate now allows consumers to switch wireless services within the same local region without changing their numbers as of November 24, 2003 [9]. Rather than spending large amounts of time and resources on coming up with new deals and promotions on the front end, businesses would be better off lowering their customer acquisition costs and focusing on attracting and retaining customers through higher quality products and more honest pricing. Instead of racing downward against competitors to artificially low prices, companies that engage in honest pricing can enjoy important benefits such as happier customers, clearer product differentiation, and consequently, higher profits [8].

Being a first mover in the advocacy space also has its advantages – once customers develop trusting relationships with a company, they are much less likely to switch to a competitor. In essence, trust creates a barrier to entry by increasing customer loyalty and forcing competitors to spend more time and resources to develop an equivalent trust based reputation. This head start would allow the pioneering companies to learn from their customers, better access market needs, design better products, and therefore, maintain their superior position even when competitors do enter and try to compete on the trust dimension. In contrast, choosing not to embrace advocacy can present great risks to a company if competitors gain the trust of customers first. The movement to a

trust-based strategy offers major long-run opportunities, however, it does present some short-run challenges and research opportunities [4].

2.3.3 Purpose of Qwest Advocacy Research

Just two years ago, in July 2002, the U.S. attorney's office in Denver launched a criminal investigation into Qwest's accounting practices under its old management. At that time, Qwest Communications could not have been further away from seeming trustworthy in the eyes of its customers and stakeholders. On June 16, 2002, Richard Notebaert replaced Joe Nacchio as the CEO of Qwest Communications, and began an initiative that some say was the "most massive corporate salvage job undertaken in recent Colorado history" [10]. In Notebaert's first months on the job, Qwest's credibility increased among numerous groups, namely investors, Wall Street analysts, employees and retirees.
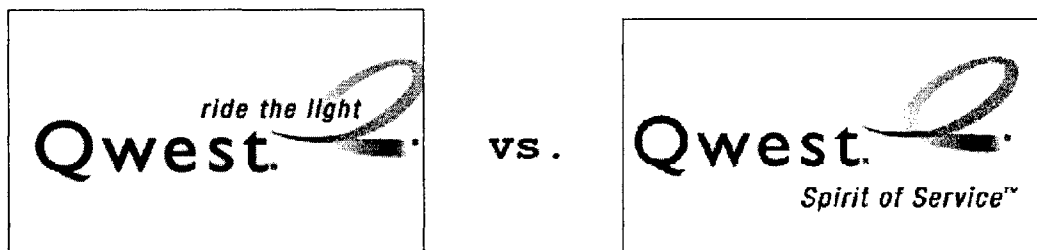
Figure 2: "Ride the Light" Campaign vs. "Spirit of Service" Campaign

Under the leadership of its new CEO, Qwest began its uphill battle in to rebuild employee pride and customer trust. Qwest embarked on an intensive customer focused "Spirit of Service" campaign to replace its old "Ride the Light" campaign that focused on products

(See Figure 2 for logo comparisons). The new campaign led to corporate-wide improvement of Qwest's TQM procedures and better training of call center personnel. Qwest simplified its rate plans by charging a flat 5 cents per minute and reduced its outbound marketing through unsolicited call marketing. Moreover, Qwest has developed a new website (www.myqwest.com) that enables customers to perform various functions online such as reporting problems, checking the number of wireless minutes used, paperless invoices, and online ordering of products and services. However, if Qwest was to reverse its tarnished company image and reputation (See Figure 3 for J.D. Power ratings for wireless carriers [11]), then Qwest has to take even more drastic measures to regain the trust of its customers, and become a competitive player in the wireless industry.
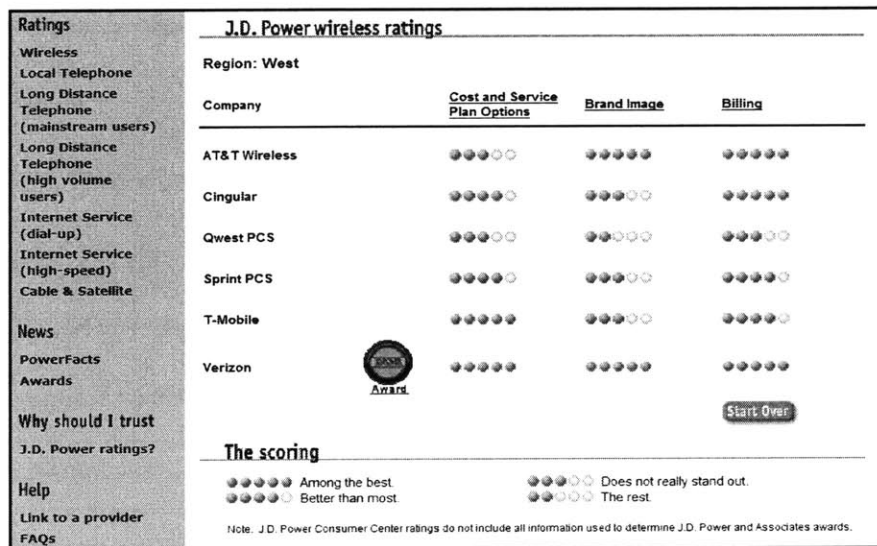

Figure 3: J.D. Power Wireless Ratings

Recently, Qwest Communications has started a research initiative with MIT to take the concept of advocacy one step further by developing profiling and evaluation techniques

designed to determine the appropriate position on the trust dimension for the company, and how applicable advocacy is to the wireless industry. The project was implemented through the design and prototyping of a wireless advocacy website to help consumers select the best service packages available to them. This functional prototype, *My Wireless Advocate*, includes successful advice-based features as well as innovative advocacy-based features such as retroactive pricing strategies and the ability to create your own wireless plans. This website highly stresses that, "customer service really serves customers", and has a virtual consumer advocate to guide people through the site, answer their questions, give them tips, and help them select the best service package available after considering all plans, including those of Qwest's competitors. Through the use of personal advocates, the website answers questions and builds confidence, which could drastically reduce the number of calls to Qwest's consumer support line. Furthermore, such a site could also help Qwest identify customer needs more accurately, which would allow them to offer lucrative additional products and services that the customers will be more inclined to buy.

An analysis of the telecommunications industry has shown that most company websites have only the basic functionalities. They do not allow customers to compare products, nor do they give advice on what products and services can best meet the customer's needs. Furthermore, these websites generally push deals and promotions that generate profits for the company rather than watch out for their customers' best interests. Qwest has the opportunity to distinguish itself in this domain by recognizing and addressing their customers' wireless needs. By being the customer advocate, Qwest could earn trust

and thereby a position of significance in the nationwide wireless market. If Qwest's efforts in customer advocacy are successful, the company could gain a leadership position in the telecommunications industry that competitors might find difficult to assail.

Chapter 3

Design of a Virtual Wireless Advocate

This chapter documents the design process of *My Wireless Advocate* website. First, the review of existing technology section will provide general background information on current advocacy related research at the MIT e-business Center and current online applications of the advocacy concept in the wireless telecommunications industry. This is followed by an assessment of room for improvement, and the basis for the design of *My Wireless Advocate* website. The second section of this chapter presents the timeline and detailed design specification for *My Wireless Advocate* and emphasizes the important breakthrough of multiple personae that will distinguish this website from existing websites. Additional trust features and considerations will also be addressed in this section.

3.1 Review of Existing Technology

Two projects at the Digital Marketing Strategy Group of the MIT e-business Center predate *My Wireless Advocate* in the area of online consumer advocacy through the use of human personae. The outcomes of these two projects significantly influenced the design of *My Wireless Advocate*. This section then examines the emerging presence of trust-based marketing strategies in the wireless industry on the Internet, in order to assess the areas of weakness in the industry and the best entry point for Qwest.

3.1.1 Current Research at MIT

The MIT e-business Center works closely with industry to research online consumer-business relationships through numerous trust cues at various stages of consumer advocacy. Two recent project initiatives that involved the development of enhancements for existing websites to help improve customer satisfaction experimented with the idea of using human personae to maximize consumer trust. The results from both projects had significant influence on the design on *My Wireless Advocate*, and are described in detail below.

The Intel project aimed to increase trust on Intel Corporation's software download and support website, and to perform systematic market experimentation on the website to improve the ease of navigation. Over a two year period, from 2001 to 2003, Intel developed a software-based human persona named "Rosa" to help guide customers through the Intel camera support website. "Rosa" assisted customers in identifying their PC cameras, selecting the best downloads, and answering their questions. Figure 4 shows a screenshot of the advisor "Rosa" interacting with customers, and a screenshot of the final experiment with added voice enhancement. Survey and click-stream data was collected from visitors to the site, and analysis indicated that these experiments measurably enhanced customer experience and improved satisfaction. The download success rate increased 22% on the camera segment of the website, which alone led to the savings of $1.1 million per year for Intel by reducing telephone support-calls, software mailing costs, as well as the service demands on channel partners. Currently, Intel is expanding the use of software-based trusted advisors across its support site.

Figure 4: Rosa Interacting with Customers and Rosa with Voice Enhancements

General Motors Corporation (GM) is in the process of shifting from a relationship position towards an advocacy position on the trust dimension. In order to do this, General Motors, in conjunction with J.D. Powers, designed and created a trusted advisor called Auto Choice Advisor (ACA). The purpose of the advisor is to interact with potential car buyers to find out their preferences and help them select the vehicle that best fit their needs, regardless of the manufacturer. The tool uses unbiased data from Automotive Information Center (AIC) and J.D. Power & Associates, and often recommends the purchase of non-GM vehicles. The website is implemented as a separate site from the GM main website, linked through sites like Kelly's Blue Book and Car Talk as a decision aid, and certified to be unbiased by these third parties. Over 700,000 people visited the site in 2003. In collaboration with MIT, GM decided to experiment with a talking-head animated advisor, "Louis", to simulate human-to-human interactions and dialogues in an online setting. Using the LifeFX technology, "Louis" can communicate using voice as well as facial expressions. The role of the advisor is to assist customers by guiding them through the website and helping them find the information and products

they need. See Figure 5 for the comparison between the current Auto Choice Advisor website and the enhanced version with an animated advisor.

While most people liked Auto Choice Advisor as a search tool for their next vehicle, many felt negatively toward the animated advisor enhancement. Some thought the "floating head" was rather scary looking, while others were uncomfortable about the level of personalization and the vocal interactions from the advisor. The fact that people were able to perceive that the animation was computer generated was also a major trust buster.
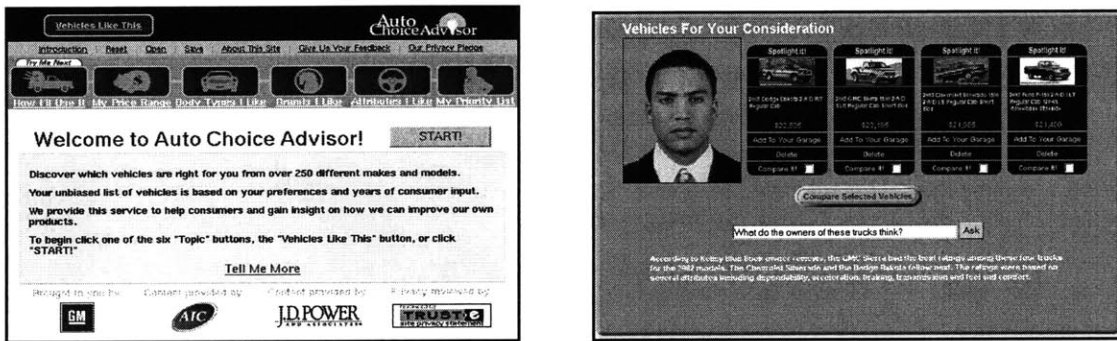
Figure 5: Auto Choice Advisor and ACA with Animated Advisor

Both the Intel and the General Motors projects greatly influenced the design decisions of the Qwest project. The success of the Intel persona "Rosa" prompted the further exploration of the persona idea, for instance the idea of introducing multiple personae that relate to customers of different demographics. The lesson learned from the GM project was that an advisor will only be trusted if people believe that there is a real live person behind the online persona; if people perceive otherwise, they will feel more

negatively toward the website. Therefore, the Qwest project chose to use static images to represent its wireless advocates.

3.1.2 Existing Wireless Websites

The hope of this research project is to find out the current level of trust development in the telecommunications industry through the analysis and comparison of the Web services offered by different national or local wireless providers and independent online product comparison tools. The study of the websites of the closely competing companies in the wireless industry serves as a guideline in the design of *My Wireless Advocate*.

Wireless websites can be categorized into first party sites and third party sites. First party sites are websites directly sponsored by wireless service providers such as AT&T, Verizon, Cingular, T-Mobile, Nextel, and Sprint PCS. Third party sites, such as LetsTalk, InPhonic and Mobiledia, are websites that compare between products and services offered by several different wireless providers.

Figure 6 shows examples of typical first party wireless carrier websites that tend to be very product and promotion oriented and less customer and support focused. These websites do not allow customers to compare products, nor do they give advice on what products or services can best meet the customers' needs. Furthermore, these websites generally push deals and promotions that generate profits for the company rather than watch out for their customers' best interests. Mail-in rebates, buy more get one free, and packaged deals are common ways of enticing customers to sign long-term contracts.

Figure 6: Examples of Wireless Service Provider Websites

As mentioned in section 2.3, the increase in competition has pushed some of the telecommunications firms to re-evaluate their business goals and redesign their websites to reflect customers' needs. Some wireless carriers started to offer information and resources to better help customers grasp new technology and select a fitting plan, while others are exploring the use of personas to relate to prospective customers. Figure 7 presents two examples of graphical tools for educating customers, found on currently existing websites. The first is an interactive tool that teaches customers about the new Sprint PCS Video Mail feature, and the second shows four different personae trying to convince prospective customers to purchase a wireless plan through AT&T. Even though these helpful tools and features are a major step up from the traditional deal focused advertisements, they are still designed to promote the company's own products and services. No attempts are made to offer any tools or links to compare products and services across a range of carriers.

Figure 7: Sprint Interactive Education and AT&T Human Personae

Product comparison is an area currently dominated by third party websites that are not biased toward any one particular wireless provider. These companies have developed creative ways to engage their website visitors and increase their affinity to the site. The flurry of third party wireless websites was prompted by the Federal Communications Commission (FCC) ruling, in 2003, that allowed consumers to switch wireless services without changing their phone numbers. David A. Steinberg, chief executive officer at InPhonic, the largest online seller of wireless services, has had his eye on the FCC action since 2001. Steinberg launched a website, WireFly.com, that aimed to simplify consumers' wireless service decisions and purchasing process. According to Steinberg, "local number portability is going to be the biggest catalyst" of the success of his business, cutting the cost of his bills by over 30 percent [9].

The draw to third party sites is one-stop comparison shopping. As shown in Figure 8, consumers can enter detailed wireless information – total number of minutes, monthly budget, as well as long-distance and roaming options – and have the software determine

the best matching carriers and plans. Alternatively, the consumer can compare detailed specifications about plans, phones and services using simple side-by-side comparison charts as shown in Figure 9. This one-stop shopping process can then be completed with the purchase of a plan and the automated porting of the customer's existing cell phone number. Some analysts predict that these third party websites "have the potential to be the Expedia of the wireless world" [9].

However, even these third party websites are not completely unbiased. On search results, the top three WireFly recommended carriers are generally paid placements, with the more thorough list of plans based on price provided below the sponsoring companies [9]. Moreover, third party websites mainly profit from exploiting the high turn over rate in the wireless industry, thus drastically adding to customer acquisition costs, and consequently to the expenses of the first party wireless providers.
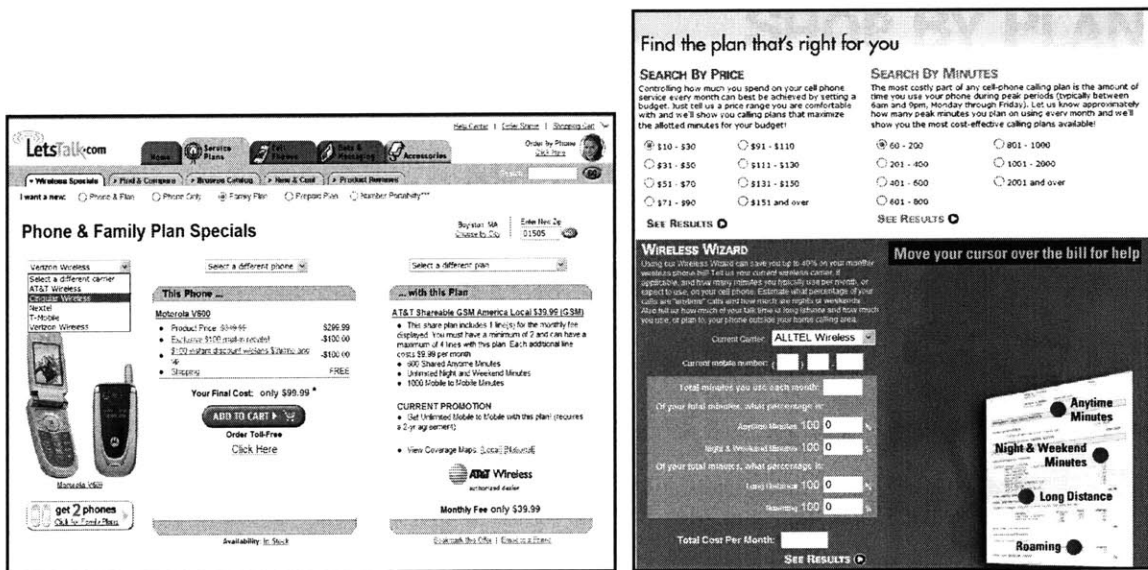
Figure 8: LetsTalk.com and InPhonic Plan Finder Tools

Figure 9: Side-by-Side Comparisons for Carriers and Phones

These existing websites in the wireless industry show that there is still room for improvements. Qwest has the opportunity to become a leader in this domain by addressing consumers' wireless needs through state of the art advisor and advocacy features that are not currently present on the Internet.

3.1.3 Room for Improvements

In the early stages of this project, 12 wireless provider sites and 15 third party wireless sites were examined on six major dimensions (information, education, advice, trust characteristics, service quality, and purchase experience) and 37 detailed attributes (see Table 3 for details). The emerging conclusions are summarized below:

Characteristics	Detailed Attributes	Evaluation Result
Information	Plan Information Phone Specification Coverage Maps Store locator Price guarantees	Wireless providers and third party sites supply extensive information; however, the information is not always relevant to the consumers, is not completely unbiased, and can often be difficult to find.
Education	Glossary FAQ Pop-up Definitions Third Party Reviews Guides and Demos	All sites provide some education. Most first party sites have only FAQ and pop-up definitions. Third party sites usually offer a bit more in terms of glossaries and guides. However, independent and unbiased evaluation data on quality and satisfaction are rarely provided.
Advice	Recommendations Plan Comparisons Find Better Plan Phone Comparisons Reasons to Purchase Consumer Opinions Community Personalized Plan All Plans Unbiased Advice	Only third party sites offer comparisons between alternatives from different carriers and phone manufacturers. Some use side-by-side comparisons and others use simple elimination of attributes to help consumers find a matching plan. However, areas such as reasons to purchase (excluding deals and promotion), personalized recommendations, and unbiased peer reviews still need improvement.
Trust	User Friendliness Ease of Navigation Transparency Company Profile Terms of Service Site Security Privacy Statement Consumer Code	Most websites are user friendly, with a few exceptions of clutter and unorganized information. Trust seals and privacy statements can be found on all sites. However, few supply customer evaluations or customer satisfaction data from third party market research such as J.D. Power or Harris Interactive.
Service	Live Support Newsletters Text Messaging Downloads Consumer Surveys	Most first party providers offer some support for their customers. However, information is difficult to find and is not personalized. Only AT&T and Qwest have live support features.
Purchase	Registration Shopping Card Online Transactions Shipment Tracking Order Status	Most companies have the capability of tracking goods that were purchased from their website. Some offer more detailed order status and transaction options. After sales support is limited, but downloads and upgrades are often available.

Table 3: Detailed Breakdown of Major Evaluation Criteria

According to our evaluation criteria, AT&T and LetsTalk received the highest overall ratings for provider and third party websites respectively. Detailed analyses of the two best-in-class websites' features are provided in Appendix I.

A good compromise between being a first party website and a third party website was the model General Motors used for its Auto Choice Advisor. Similarly, *My Wireless Advocate* was implemented as a separate site from the Qwest main website, potentially linked through sites like the Consumer Union and the FCC as an education and decision tool certified to be unbiased by third parties. In order to become a leader in the wireless e-commerce domain, Qwest's *My Wireless Advocate* needed to have state of the art features comparable to those offered by existing websites, and advanced features that would distinguish *My Wireless Advocate* from other websites. There were several outstanding features in the existing websites that would have been nice to incorporate into the design. However, due to the limited scope and time frame of this project, the team decided to focus on researching new and creative ways to engage consumers in the wireless selection process through the design and implementation of a proof-of-concept prototype. The next section will provide a detailed design specification of *My Wireless Advocate*, with a strong emphasis on the importance of having multiple personae and other trust building features.

3.2   Design of a Wireless Advocacy Website

The objective of this research project was to develop a prototype website using multiple virtual advocates to establish trust between prospective wireless customers and *My*

Wireless Advocate through dialogues, personalized recommendations, and unbiased advice. Based on the lessons from previous research projects and the assessment of the current online presence of trust in wireless services, a timeline of the project and a detailed design specification was drafted for *My Wireless Advocate*. The specification included first generation features that were deemed necessary for the success of *My Wireless Advocate*. Several design decisions are highlighted at the end of this section. One was to offer the wide demographic spread of wireless customers a selection of human personae that they could choose for their advocates, while another was to add trust enhancing details such as trust seals and customer commitment statements.

3.2.1 Five Phases of the Project

As part of its one-year research sponsor membership with the MIT e-business Center, Qwest gained a working customer advocacy website, which could later be implemented to a production level and made available for general commercial use. In exchange, MIT gained research experience in implementing a customer advocacy strategy through the Internet that it can methodologically describe in academic publications. This one-year research project was implemented in the five different phases detailed below.

Proposal Acceptance and Initial Analysis (October 1st, 2003 – November 15th, 2003):
The proposal acceptance and initial analysis phase included detailed comparisons of various Internet-based wireless services offered by numerous telecommunications as well as third party companies. The results of these feature comparisons were used to specify a preliminary set of design criteria. At the end of this phase, MIT was required to deliver

to Qwest a comprehensive cross-examination matrix of the different wireless plans, services and tools currently existing on the Internet, as well as the initial design specification.

Website and Page Flows Design (November 15th, 2003 – January 1st, 2004):

The website and page flows design phase focused on the design of several components of the *My Wireless Advocate* website that would lead to consumer trust. Based on feedbacks received for the initial design specification, existing trust building features were incorporated and new innovative features proposed. A preliminary set of static screen layouts displaying the recommended flows and functionalities of the advocacy website were delivered at the end of this phase.

Algorithm and Feature Development (January 1st, 2004 – March 15th, 2004):

Several iterations of feedback and redesign occurred during the algorithm and feature development phase of this project. Here, the screen shots and path flows from the previous phases were converted into live Web pages using HTML, JavaScript and PHP. The algorithms developed in this phase encapsulated all the intelligence behind the content of *My Wireless Advocate*.

Database Development and Prototype 1.0 (March 15th, 2004 – May 1st, 2004):

The bulk of the backend development for *My Wireless Advocate* was done during the database development phase. A detailed database of different wireless services and plans was built and linked to the prototype to complete the functionalities for version one of the

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website. At the end of this phase, Qwest received a fully functional prototype that included advanced advisor features and new ways to search and compare different providers and services. This was a research prototype, and Qwest is expected to create a production version of the website for commercial use in the future.

Prototype Testing and Future Enhancements (May 1st, 2004 – May 30th, 2004):

The final phase of the Qwest advocacy project was prototype testing and future enhancements. This phase included the design and implementation of a preliminary focus group study to find major design flaws and key concerns for *My Wireless Advocate* website. The deliverable for this phase was a detailed year one project report documenting the implementation process of *My Wireless Advocate* and addressing the important issues uncovered in the focus group study. A written proposal for continued research that included year two enhancements of *My Wireless Advocate* was also provided.
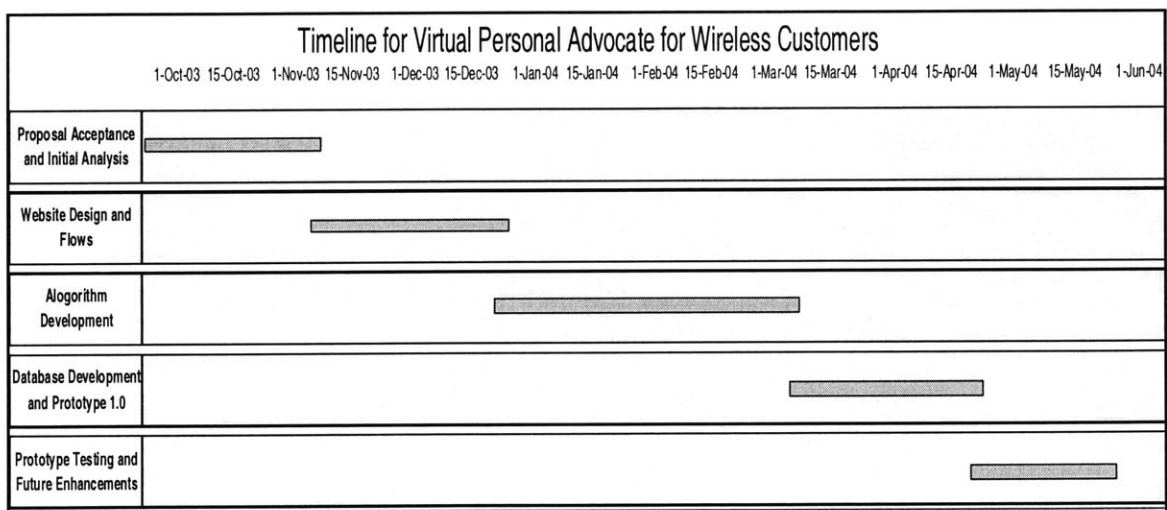
Figure 10: Design and Implementation Timeline

The first year research collaboration between MIT and Qwest was scheduled for completion at the end of May 2004. The five different phases of this project were implemented in sequence following a timeline as shown in Figure 10.

3.2.2 Detailed Design Specification

The same standards were applied to the design of *My Wireless Advocate* as were used to evaluate the existing online wireless services. The six major dimensions (information, education, advice, trust, service, and purchase) were further condensed into information, education, advice and advocacy. These four categories were thought to be the basic features that were necessary for the success of a new advocacy website in the telecommunications industry. Descriptions of the detailed attributes under each of the four categories are provided in Tables 4 to 7.

Information: this website must provide complete and unbiased information to consumers.

➤ Wireless plan comparisons based on price and consumer need
  • Searchable database of plans sorted by provider or price
  • Spotlight section for featured plan of the week based on consumer ratings
➤ Cellular phone specifications
  • Searchable database of phones sorted by functionality or price
  • Spotlight section for featured phone of the week based on consumer ratings
➤ Coverage maps of different wireless providers
  • Searchable database of wireless providers based on consumer location
  • Color coded coverage map for different wireless providers
➤ Store locator for different carriers
  • Searchable database of wireless vendors based on consumer location
  • Quick links to online order forms for different service providers

Table 4: Information Feature and Attributes

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Education: this website must serve as a learning facility to aid consumers in their wireless selection process.

➢ Basic Education
  • Glossary of terms organized by categories with advanced search capabilities. Categories can include:
    o plan definitions (e.g., roaming, long-distance, anytime minutes, etc.)
    o phone definitions (e.g., display quality, sound quality, security, etc.)
    o operation definitions (e.g., caller ID, voice activation, etc.)
  • Frequently asked questions organized by categories with advanced search
  • Pop-up definitions throughout the website to offer convenience
  • Guides, demos, tips with quick links on appropriate pages throughout the site
➢ Customer Ratings
  • Similar to epinions.com, consumers are allowed to rate a wireless plan or product on a scale of 1-5 based on their experience and satisfaction. The average rating as well as the number of people who submitted ratings will be displayed to help future customers make their decisions.
➢ Third Party Data
  • Publish consumer survey results (e.g., complaints, satisfaction, etc.) based on data collected by third party agencies (e.g., J.D. Power, Harris Interactive), categorized by products and plans.

Table 5: Education Feature and Attributes

Advice: this website must offer unbiased advice to consumers based on their needs. This can be creatively implemented using the following methods.

➢ Advisors
  • Multiple personae (e.g., business professional, traveler, parent, student, etc.)
  • Possible hot links to real people for real time chat and advice
  • Site navigation guide to help consumers find the information they need
➢ Brand Segmentation
  • Brand segmentation based on market segments (e.g., age groups, location)
  • Product differentiation using consumer ratings and reviews
➢ Rate Simulator and Comparison to Existing Plan
  • Find best match between consumer needs and existing plans
  • Provide consumers with a set of better plans over their existing plan
➢ Recommendations based on budget and other resource constraints
  • Provide consumers with plan recommendations based on location, usage, budget and other consumer criterion.

Table 6: Advice Features and Attributes

Advocacy: this website should advocate for consumer rights, listen to customer suggestions, and provide support to consumers in need. ***This is the feature that will distinguish My Wireless Advocate from other existing websites.***

> FCC consumer complaint application support
  - Dispute prevention through clarifying misunderstandings and education
  - Complaint resolution through:
    o Mediation – neutral mediator assists the parties involved in reaching their own settlement but does not have the authority to make a binding decision
    o Arbitration – submission of a dispute to one or more impartial persons for a final and binding decision.
    o Ombudsman – someone who represents the consumer in trying to find a solution that is most satisfying to the customer
  - Provide FCC complaint applications that can be filed with a click of a button
  - Alternative third party resolution processes:
    o American Arbitration Association: *http://www.adr.org*
    o SquareTrade (complaint resolution agency used by ebay.com)
> Consumer complaint resolution with service providers
  - Dispute prevention through clarifying misunderstandings and education
  - Complaint resolution through direct contact with service provider
> Pro-active switching between plans
  - Consumers can sign up to be notified when a better plan comes along
  - Consumers can choose to switch plans right from the website after reviewing plan comparison charts (with out having to pay switching charges)
> Retro-active pricing based on usage data for a period of time
  - Consumers have the option of switching to the plan that minimizes their cost at the end of the billing period

Table 7: Advocacy Feature and Attributes

As described in Section 3.1.3 Table 3, most wireless providers and third party websites offered information and education to some extent. However, few third party websites provided consumers with useful advice and recommendations, and consumer advocacy in the wireless industry was practically non-existent. Therefore, the main research interest of this project was in the attributes mentioned under the advice and advocacy sections of the design specification, because these were deemed the areas on which the Qwest project would have the most impact.

3.2.3 Additional Trust Features

One key component of trust building is consumers' technical knowledge of an industry or product. Trust operates in different ways depending on consumers' state of knowledge. When consumers know a lot about a purchase decision, they will trust the sales source if it respects their intelligence by speaking the truth and adjusting the conversation to the consumers' levels of knowledge. Conversely, if consumers are limited in their product knowledge, they are more likely to develop trust with the sales source that recognizes their concerns, attempts to listen to their needs, and takes on the role of a consultant [6]. Therefore, it made sense to offer a split path design for the two different segments of consumers: an information intensive path to accommodate experienced users who would prefer to search by attributes, and a personalized advisor path to assist less experienced users who would prefer advice and help along the way.

Similar to Auto Choice Advisor, *My Wireless Advocate* initially displayed a mission statement explaining the purpose of the website and the motivation behind Qwest's sponsorship (as shown in Figure 11). From there, users could choose to enter the website through either the information intensive path or the personal advisor path based on their experiences and preferences. The information intensive path offered the customer extensive amount of information and services up front to help them better choose their next step. The personalized advisor path reduced the clutter of information presented to the customers by first assessing their needs and preferences through a series of conversational dialogues with a virtual advisor. The difference in the appearance between the two paths can be easily seen in Figure 12.
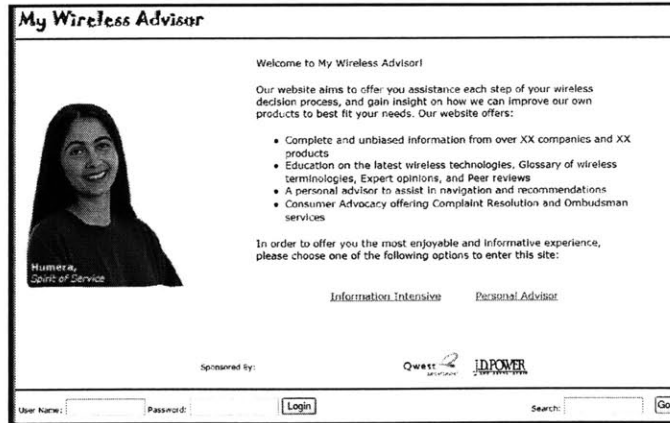
Figure 11: Main Page with Mission Statement
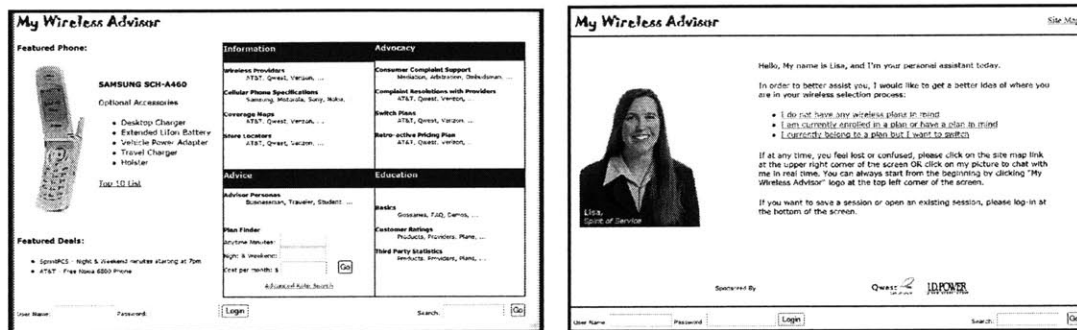
Figure 12: Informational Intensive Path vs. Personal Advisor Path

However, several problems manifested with the split path design. First, users might not know which path is suitable for them until they explored deeper into the website. Second, users could not easily switch between the two paths while they navigate. Finally, it is generally good practice to keep the number of pages along any path to a minimum, so that users have fewer chances to drop out before their tasks are completed.

The next iteration of design merged the information intensive path and the personal advisor path into a streamlined layout to offer all consumers the same experience throughout the website. Users who preferred direct search would become accustomed to using the menu to the left side of the screen. Users who preferred more guidance along the way would be assisted by one of many virtual advocates present on all pages in the path. The multiple advocate personae were chosen to match a large portion of the demographic of current wireless customers. The multiple personae concept was realized through a pull-down menu of possible advocates to whom customers could relate. Figure 13 presents the new streamlined design of *My Wireless Advocate* with two alternative advocates. Users who wanted to learn more about the concept of advocacy and the motivation behind Qwest's sponsorship of *My Wireless Advocate* could utilize the top menu on the website. The new design offered considerable textual and graphical enhancements over the original design (shown in Figure 11 and 12) and focused on attracting users to the concept of advisors. Users could also learn more about their chosen advocate through the description of the advocate's occupation and lifestyle written from the persona's perspective using verbiage that is suited for that advocate. For example, a younger advocate such as "Adam Smith", the college student, would tend to use terms such as "Awesome" and "Cool". Older advocates such as "James Brewer", the Wired Magazine Publisher, would tend to converse in a business context using terms such as "Productive" and "Cost efficient".

Figure 13: Two Alternative Personas for My Wireless Advocate

Multiple personae could also be used for product and brand segmentation, as mentioned in the advice section of the design specification (Table 6). This means that different segments of consumers might be interested in different optional features of products and services. For example, the younger generation of wireless users might be interested in cutting-edge technology and the ability to text message their friends, whereas the older generation of wireless users might care more about family plans and coverage areas. Therefore, it made sense for "Adam Smith" and "James Brewer" to recommend different optional features and accessories that were more suitable for and more likely to appeal to their corresponding audiences.

Most of the existing wireless websites did not offer any personalization or segmentation, and customers were often overwhelmed by the amount of irrelevant information and untargeted promotions presented on a website. Some companies now offer limited static profiles stating general reasons to purchase a wireless product (as shown in Figure 14). These hard-coded "personas" do not follow users as they navigate through the site, and offer no personalized advice or recommendations beyond the non-interactive text-based pages on which they exist. In contrast, an advocate from *My Wireless Advocate* accompanies the user each step of the way, offering customized tips, targeted recommendations, useful suggestions, and relevant product information. This truly exemplified the concept of consumer advocacy, and was an area designed to distinguish *My Wireless Advocate* from the rest of the wireless advice tools. Figure 15 shows a search results page displaying different tips from different advocates while keeping the search results objective.

Figure 14: LetsTalk Users Like You Page

Figure 15: Personalized Advice from Different Advocates

Another key component of trust building is consumers' perceptions of trust on a website

or business. Marketing research found the website characteristics that affect consumers'

trust perceptions the most included: privacy, security, presence of trust seals, the ease of navigation, brand, advice, absence of errors, presentation, order fulfillment and community [12]. Therefore, as an improvement over the initial design, the new streamlined design included trust seals and third party logos on every page of the website. In addition, the top menu contained links to resources, detailed explanations of the advocacy concept, and *My Wireless Advocate*'s commitment to its users. Figure 16 presents the *My Wireless Advocate* top menu and third party trust logos that appear on every page of the website.
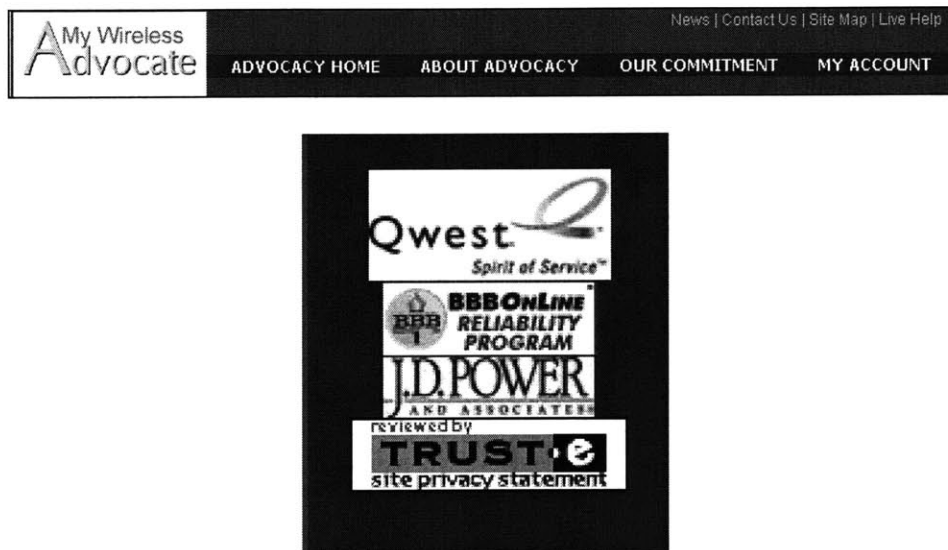
Figure 16: Commitments and Trust Seals

Chapter 4

Implementation of a Functional Prototype

This chapter details the implementation process and the technology behind the major features and functionalities of *My Wireless Advocate*. The first section provides a birds-eye view of the behind-the-scene technologies, and a glimpse of the relationships between various high-level features of the website through its page flow diagram. The second section drills deeper into the website and provides detailed descriptions of four innovative features that are of high interest to this research project.

4.1   Implementation Overview

Based on the initial design specification, a set of graphical static screen layouts was created using Adobe Photoshop. The purpose of this initial set of static screenshots was to facilitate the exchange of ideas and feedback between Qwest and MIT. After several iterations of redesign, the final set of screenshots was presented to a Vice President in the IT division of Qwest at their Denver headquarters at the end of January 2004. The design layout and advocacy concepts were discussed in detail, and after a few minor adjustments, the website was ready for implementation.

4.1.1   Technology Overview

From the final screenshot layouts of the proposed design, the static portions of *My Wireless Advocate* were converted into actual Web pages using HTML.   However,

HTML was not sufficient for implementing some of the advanced interactive features of the website. Examples of these advanced features included the "select your advocate" pull-down menu, and the dynamically updated frame that provided relevant information and advice based on the user's current feature of interest. These functionalities were implemented using on-click and the layer elements of Dynamic HTML (i.e., a combination of HTML, Cascading Style Sheets, and JavaScript).

A server side scripting language, PHP, was then used to streamline the code base by adding modularity and reusing existing segments of code. In particular, the top menu, the main menu and the pull-down menu for selecting an advocate were all stored separately and included in each page of the website, such that only one file needed to be updated if a menu item required change. In addition, PHP was used to pass along information such as user preferences from page to page. For example, the system kept track of the user selected advocate and customized each page accordingly. More importantly, PHP was used to interpret user inputs, query the database, and return actual data such as specific carrier and plan information to be displayed on the website.

The creation of the database containing comprehensive wireless plans and carriers came after most of the other functionalities of the website were in place. Because version one of *My Wireless Advocate* was intended to serve as a functional prototype, Qwest did not provide the MIT team with their database of other company profiles and plans. Therefore, the database table containing plans and carriers for *My Wireless Advocate* was built from information provided by LetsTalk.com. The MIT team used a PHP script to

automate the process of to retrieving information from LetsTalk and uploading information to the database. In addition, another table in the database was created to keep track of the advice different advocates would give throughout the website.

The entire code base for this project was physically stored at MIT on a Fedora Linux server running Apache and PostgreSQL database. This code base along with detailed documentation was transferred to Qwest upon the completion of the project.

4.1.2 My Wireless Advocate Path Design

After many iterations of design and screenshots, the final requirements for *My Wireless Advocate* were condensed into eight essential features. These eight features were split into advocacy and resources categories on the main menu. The advocacy category encapsulated all the attributes from the advice and advocacy sections of the design specification (Tables 6 and 7) into five features, and the resources category encapsulated all the attributes from the information and education sections of the design specification (Tables 4 and 5) into three features. Figure 17 shows the top-level page flow diagram of *My Wireless Advocate* and the descriptions of each of the eight features. The four bolded boxes are the features of high interest for this project, and were intended to be fully functional and tested by the end of the collaboration between Qwest and MIT.
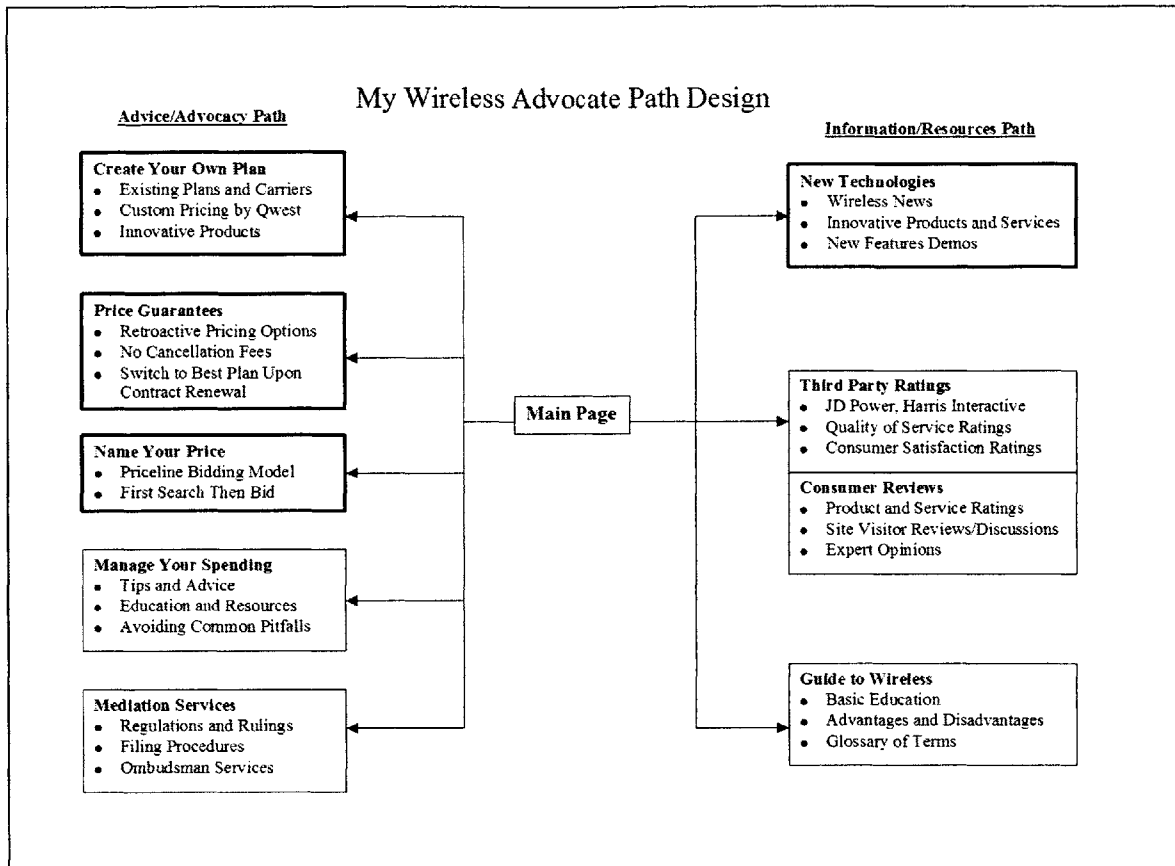
Figure 17: My Wireless Advocate Top Level Flow Diagram

These eight basic features captured all the attributes needed to convey the concept of consumer advocacy through *My Wireless Advocate*. However, for the scope and research purposes of this project only four of the eight essential features were implemented with full functionality. The following section will describe each of these four features in detail.

4.2   Implementation Details by Feature

Instead of re-inventing the wheel for existing ideas and features, it was more interesting from a research perspective to study the feasibility of introducing trend-setting features

that could benefit the society as a whole. Therefore, four of the eight essential features

focused on innovations that are not currently available in the online wireless industry

were chosen for implementation. Various research and events influenced and inspired

the design and considerations behind these four distinguishing features. Each of the

following four sections describes in detail the concept behind one of the four new

features and the challenges faced implementing that feature.

4.2.1 Create Your Own Plan

"Create your own plan", shown in Figure 18, is designed to improve upon existing

attribute elimination processes of finding matching wireless plans for consumers. This

feature uses a standard web form with required and optional input fields to assess what

the consumer wants in a wireless plan. Using this information, it attempts to find exact

matches among all plans in the database. If no exact matches are found, instead of

returning zero matches to the consumer, *My Wireless Advocate* generates a custom plan

offered by Qwest, as well as close matches from other carriers.

For consumers who are unfamiliar with technical terminologies or those who wish to

learn more about various wireless features and plans, "Create your own plan" also offers

dynamically updated information and customized advice. In a separate frame on the right

side of the screen, objective general information as well as advisor specific benefits and

considerations are provided whenever a user clicks on an input field of interest. This

feature is especially helpful for inexperienced users and first time purchasers. Advanced

users can still benefit from the customized advice given based on the advocate they

chose. Advocates offer personalized suggestions in terms of benefits and considerations for each wireless feature underneath its general description, so users can pick up tips and avoid common pitfalls that they might otherwise overlook. Even more information intensive users can choose to ignore the right frame completely, and instead directly enter their preferences and search criteria into the input fields in the middle of the screen. This design allows users with different levels of expertise to search and navigate at their own comfort level, while providing the same overall experience for everyone.
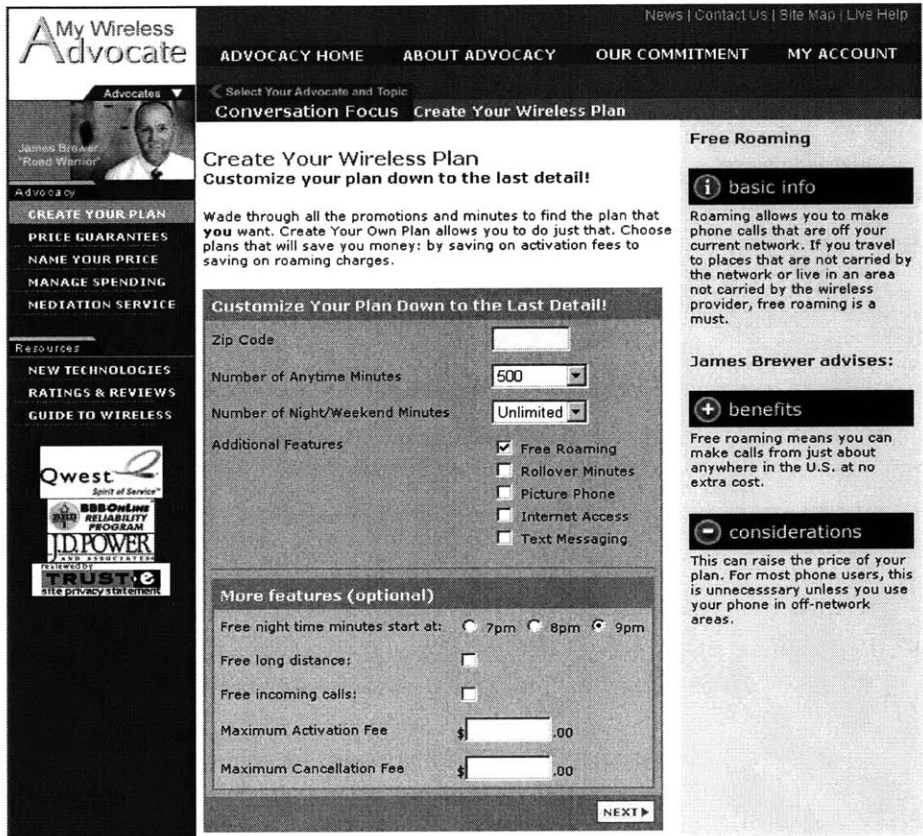

Figure 18: Create Your Own Plan

After consumers receive their list of matching plans on the search results page, they can choose up to three wireless plans to evaluate in close detail. The side-by-side comparison

chart, shown in Figure 19, displays a comprehensive list of wireless features arranged by categories for easy viewing. *My Wireless Advocate* also draws attention to the major differences among the plans being compared using color-coded highlights in order to better assist users in their selection process. For example, Figure 19 shows the benefits or perks of a plan in blue and the warnings or disadvantages of a plan in red.

Figure 19: Side-by-Side Comparisons with Highlights

4.2.2 Price Guarantees

There are four different ways consumers can benefit from the price guarantees section of *My Wireless Advocate* – "retroactive pricing", "automatic switching", "no cancellation

fees", and "shared landline and wireless minutes". Due to the limited scope of this project, only the "retroactive pricing" feature, shown in Figure 20, is fully implemented.

German electric utilities companies that compare plans for their customers inspired the "retroactive pricing" feature of *My Wireless Advocate*. At the end of each year, utilities customers are retroactively put in the plan that would have been the cheapest for them given their usage. The system rewards customer loyalty, since people who switch providers in midyear lose the low-price benefit for the previous year [8]. Similarly, the "retroactive pricing" feature on *My Wireless Advocate* allows users to access their wireless usage information that would not be provided to them by their wireless carrier, and informs users that they might be able to save money by switching to a plan that better fits their usage patterns.
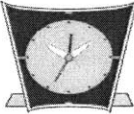
Consumers who are tricked into purchasing a plan full of hidden charges will have the opportunity to switch out of that plan without penalties such as termination fees. Up to two months of over charges can be refunded to the user upon the switch to a different service. This is under the assumption that since the customer acquisition cost in the industry is around $250 and the early termination fees average $150, the company whose plan better fits the consumer would be willing to pay for the refund and cancellation fees in order to acquire a new customer.

Figure 20: Price Guarantees (Retroactive Pricing)

4.2.3 Name Your Own Price

"Name your own price", shown in Figure 21, is modeled after the Priceline.com bidding system used for the airline industry. The purpose of this feature is to allow budget-constrained users who are fairly flexible with respect to features and plans to negotiate the best available rates among all wireless providers. The "name your own price" feature differs from traditional push-based deals and promotions in that it gives the consumers the upper-hand in deciding what they want in a wireless package, and the amount of money they are willing to pay for it.

In order to protect the consumers against hidden fees and non-standard charges, "name your own price" provides a detailed guarantee stating that all wireless plans purchased from *My Wireless Advocate* include certain standard features and coverage area, and have an upper bound on the amount of applicable charges such as over-usage and early termination fees.

Figure 21: Name Your Own Price

4.2.4 New Technologies

"New technologies" is a fairly straightforward section that serves as a one-stop learning center to keep consumers up-to-date on all the latest news and cutting-edge technology. This feature distinguishes itself from the "guide to wireless" feature, which offers only basic education to consumers such as glossary of terms and frequently asked questions.

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New technologies is designed to act as a stepping stone for community building efforts in

version two of *My Wireless Advocate.*

Figure 22: New Technologies

Chapter 5

Focus Group Study

This chapter summarizes the design and implementation of a preliminary focus group study that was used to evaluate the progress and direction of *My Wireless Advocate* compared with other existing websites. The first section provides a general overview of the purpose and methodologies behind this study. The second section presents the results of the focus group study through an analysis of participants' feedback.

5.1   Overview of Study

After making considerable progress in the implementation of *My Wireless Advocate* prototype, it was time to solicit some outside feedback regarding the current design and future direction of this project. Due to the unfinished nature of *My Wireless Advocate*, it was decided to try out the concepts on a small group of relatively advanced Internet users such as MIT students. While MIT students are not representative samples of the average population, the focus group study results can still be used as a guideline to solve major design flaws and conceptual problems.

5.1.1   Focus Group Purpose

The purpose of this study was to test the usability of some selected websites and understand consumers' reactions to specific site features and their perceptions of trust. The study was designed to gather information on the acceptability and usability of the *My*

Wireless Advocate website. In particular, it examined people's general attitude toward the website and their reactions to the new consumer advocacy features. This helped us in identifying measures of antecedents, dimensions, and consequences of trust as perceived by consumers online, as well as gaining an insight on specific advocacy features that impact consumers' perceptions of trust in a website.

5.1.2 Methodologies and Tasks

The focus group study consisted of 18 MIT students from 3 different majors at the end of April 2004, all of which were current or potential wireless services customers. The participants were asked to make a series of comments about the three websites selected for this study: Verizon Wireless, LetsTalk.com, and *My Wireless Advocate*. Verizon Wireless is the number one wireless provider in the United States. LetsTalk.com is an overall excellent third-party wireless website that serves as an independent resource for wireless product and service comparisons. And *My Wireless Advocate* aims to achieve more than LetsTalk by really looking out for its customers' interests and offer unbiased advice and new features that are not existing in the current market. The focus group study, which took approximately one hour, was conducted in two parts of 30 minutes each.

During part one of the study, for each of the three selected websites, participants were given a guided tour of the website and its main features, asked to perform certain tasks on the website and to browse freely. Participants were then encouraged to express their thoughts in an unstructured and natural manner in a discussion with others participants

and the moderator. Specifically, participants were given the opportunity to express their overall impressions of the website as well as their likes and dislikes of specific features on the website, the design and ease of use of the site, and the content, advice, and trustworthiness of the website, while it was still fresh in their minds.

In the second part of the study, having already browsed and discussed all three websites independently, participants were asked to participate in a general discussion expressing their opinions regarding all three sites and making comparisons among the sites. The participants were encouraged to brainstorm collectively, so that a number of ideas, issues, topics, and even solutions to problems could be generated through the discussions. Participants were then asked open-ended questions to evaluate the ideas and concepts found on the three websites, to assess their usability. Following the general discussion, the participants were given a short questionnaire to explore more critical issues such as preference, ratings, and intent relating to consumer advocacy and *My Wireless Advocate*. A copy of this questionnaire can be found in Appendix II.

5.2   Focus Group Results

The focus group study was carried out successfully. All participants actively participated in the group discussions, and an abundance of information and suggestions were collected to serve as a guide for the next phase of the project. The design and implementation process of the focus group was also a great learning experience for the researchers.

5.2.1 Comments by Website

In general, Verizon Wireless was perceived to be a seller's site that did not offer any brand comparisons or mention any of its competitors. Even though wireless plans were well organized into different categories, they were difficult to differentiate because no comparison or search functionalities were offered. There were many plan choices and numerous options under each plan, but the limited amount of descriptions and definitions made it difficult for consumers to make a decision. No education or advice was offered on this website, making the experience for first time users rather confusing and disorienting. Consumers also had difficulties understanding fine print and pricing details, such as warranty terms and the three different national coverage areas. It was obvious that the site cared more about pushing expensive plans than plans that fit consumers' needs, since the more expensive plans are listed on the plans overview page while the cheaper plans were further down the path. Verizon Wireless was consistently ranked the third preferred website for wireless shopping process, after LetsTalk and *My Wireless Advocate*.

LetsTalk was the best received of all the websites tested in this study. Focus group participants thought most of the problems they had encountered with the Verizon Wireless website were addressed by this website. Extensive amounts of information regarding plans and phones from various carriers and manufacturers were available. State of the art search and comparison tools were tremendously useful for parsing through all the options and features in order to narrow down the products of interest. Detailed side-by-side comparisons were especially well received by participants, as they

clearly presented major features as well as fine print, such as termination agreements and activation fees. However, the immense amount of information available on this website also had its drawbacks. It was often difficult to navigate and find the useful and relevant tools and features mentioned earlier. Because of the website's heavy emphasis on promotions and savings, the focus group perceived this website to be most beneficial for deal oriented people. In general, most felt they would be able to eventually find the best matching plan from the vast resources available on this site, however it could be a very time consuming task due to the website's complex layout. One major drawback of a third party website like LetsTalk is its infrequent update of vendor plan information that could cause inconsistencies between what was published on the first party website. For example, one focus group participant found the exact same plan on both LetsTalk and Verizon Wireless, and noticed that even though LetsTalk advertised an 11% savings, the plan was still cheaper when purchased through the Verizon Wireless website. Regardless, while many participants were not aware of the existence of LetsTalk until this focus group study, most said they would use this site to research or purchase their next wireless package.

Focus group participants had somewhat mixed impressions of *My Wireless Advocate*. In most cases people liked the concept and ideas behind the website, but would rather have seen and used it in a more polished form. A majority of the participants found the streamlined design and the graphical layout to be personal, friendly and easily navigable. Many thought it was a good informational page that was simple and straightforward. Some current wireless users would have liked to take advantage of the features and tools

of this site to find cheaper and better fitting plans, while others thought this site was more suitable for inexperienced consumers because of its education and personalized advice features. A few people commended the website on its absence of advertisements and promotions, while others noticed the Qwest logo and felt the site was biased towards Qwest. Several people questioned the motivation behind Qwest's sponsorship for *My Wireless Advocate*. Besides a few misunderstandings of the more innovative features, most would try these features on the production version of the website if given the opportunity. Detailed participant comments on each of the *My Wireless Advocate* features are provided in the next section.

5.2.2 Feature Specific Comments

The advice and advocacy features of *My Wireless Advocate* were designed with the research interests of this project in mind. This means the trust features on the website were spread across various levels of the trust dimension to determine consumers' reactions to trust-based marketing and their readiness to accept new technologies. Therefore, it was fully expected that some of the features on *My Wireless Advocate* would be better received than others. However, the downside to offering a wide spectrum of new features was that consumers could be overwhelmed by the selection of features, and have a tough time distinguishing among them. Another issue was that one or two confusing features might lead to a general negative feeling toward the website.

Most study participants understood the "create your own plan" feature, and thought it was a helpful tool for finding wireless plans. However, some wished that it had given wider

ranges for the amount of minutes allowed instead of an approximate number of minutes. Some would have preferred more search options, such as budget constraint and family plans. Many compared this feature to the "find and compare" feature provided by LetsTalk, but favored the LetsTalk approach more. LetsTalk's "find and compare" used an attribute elimination process to display matching plans to consumers. For example, everyone would start off with all the plans in the database, and the number of matching plans would gradually decrease as users entered more constraints. "Create your own plan", on the other hand, would first ask for user preferences, and then display the matching plans on the next page. This caused some peculiar usage patterns to be matched only with Qwest's Customized Plan, which led to participants' suspicions of whether *My Wireless Advocate* was truly unbiased.

Most people did not initially understand the concept of "retroactive pricing". After the moderator gave a more in-depth explanation of this feature, some people thought it was a nice idea and would be rather helpful if it was more developed and better implemented. Several people were worried about the fact that cheaper plans might take away features that they might potentially use. This indicates that some times consumers would prefer to pay a small premium to receive additional minutes and optional features "just in case". Some pointed out that the source of the refund (i.e., *My Wireless Advocate*, Qwest, or other first party providers) was not clearly indicated on the website.

Most people understood the concept of "name your price", and were able to easily make the analogy to Priceline.com. Despite this, the survey results indicated low ratings on the

usefulness of this feature. Quite a few participants had trouble differentiating this feature with the "create your own plan" feature. Some suggested that the "name your price" feature could be eliminated entirely if budget constraint was added as an input field in "create your own plan". Unlike airplane tickets, wireless plans are quite complex and require a long commitment. Therefore, many were uncomfortable with the idea of bidding on a wireless plan that did not have all the contract terms and extra charges spelled out in detail. The discussion feedback showed high consumer desire for transparency in the online wireless industry.

Nearly everyone welcomed the idea of using multiple personae to offer customized experiences and personalized advice. The majority of participants felt customization was the best way to receive the most relevant information without wasting time on unnecessary products and unwanted promotions. Many liked and would use the personalized "benefits and considerations" function before entering a plan attribute. However, many felt the advice given on the prototype version of *My Wireless Advocate* was too general and would only be useful for inexperienced first time buyers.

Chapter 6

Future Research and Recommendations

This chapter summarizes research findings from the previous chapters and provides recommendations based on those findings. The first section reveals some major trust busters that resulted in the less than positive ratings of *My Wireless Advocate*. The second section focuses on the current known issues of the website, presents several solutions to the existing problems, and suggests a few ideas for future enhancements to the website.

6.1   Lessons Learned

In a recent Golin/Harris poll, nearly 70% of Americans agreed with the statement, "I don't know whom to trust anymore [4]." In order for a company to become trustworthy in consumers' eyes and to build a solid long-term relationship with the general population, it first has to overcome consumers' initial distrust. Because of people's natural or acquired tendency to distrust companies, especially on the Internet, any trust busters on a website could only negatively reinforce this natural tendency and lead to negative perceptions of that site. The following section presents the major trust busters that were uncovered in the study, all of which serve as examples for what should be avoided in future research studies.

6.1.1 Website in Development

The fact that *My Wireless Advocate* was designed as a proof-of-concept prototype and was not implemented to a production standard hurt its ratings considerably in the focus group study. Most people commented that they would be willing to try out the new features in *My Wireless Advocate* if the functionalities were more polished and all the kinks had been worked out. One participant even said he did not trust the site because it would not allow him to explore deeper into the site to find out the detailed recommendations of his advocate, or to complete his bidding process. The fact is that every time a user runs into a broken link or a dead end on the website, his overall feeling towards the website is going to drop regardless of the moderator's initial comment that *My Wireless Advocate* was still in development and the website should be evaluated on a more conceptual level. Even though many participants professed to liking many of the features that made *My Wireless Advocate* unique, as one focus group participant put it, "knowing it was a concept site really lowered my trust of the site."

6.1.2 Quality of Content

The quality of the content is also very important in affecting people's trust perceptions toward a website. This project emphasized the research in determining the feasibility of the trust concepts in the wireless industry through three new features: "create your own plan", "retroactive pricing guarantee", and "name your price", instead of the detailed design for the actual content of the website. For example, even though the website clearly showed that different advocates provided different advice while helping consumers customize their wireless plans, people were generally dissatisfied with the

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quality of advice given from this website, because not enough thought was put into the actual wording of the advice. Another example is that Qwest did not provide the MIT research team with their database of comprehensive products and services from all competitors, therefore, *My Wireless Advocate*'s wireless plans database was generated using information gathered from the LetsTalk website. Because LetsTalk did not have a complete database (e.g., did not include plans from Sprint PCS), it violated one of the major rules of consumer advocacy – to provide complete and unbiased information, understandably resulting in negative feedback from users.

6.1.3 Brand Trust

The brand effect was another factor that contributed negatively toward the ratings of *My Wireless Advocate*. It was discovered that people were generally smart enough to see through any corporate sales schemes if the company was not 100 percent devoted to the concept of trust. For example, some of the participants saw the Qwest logo and noticed that the Qwest Customized Plan always came up first during searches and comparisons. Consumers questioned *My Wireless Advocate* as an unbiased third party informational website, despite Qwest's intentions behind this design decision. In fact, the Qwest Customized Plan was a mathematical algorithm that generated a price for a plan that included the exact number of minutes and set of optional features based on the consumer's input, and was therefore always the best matching plan for that consumer. A majority of participants were curious about the motivation behind this website and Qwest's incentive for offering this service. In general, participants from the focus group

would have felt more comfortable if a mission statement clearly stating the purpose of the website was presented to them on the front page.

6.2 The Next Step

The focus group study has shown that the most important element of a website for users was trust. As discussed earlier, consumers must be able to trust a website in order to feel comfortable shopping and receiving advice from it. In order to obtain the trust of the consumers, a website must provide a myriad of features. First, the website must provide relevant and high quality content to the consumers. Second, the website must make it clear to the consumers that it is providing completely unbiased and fair advice. Finally, the website must seem professional and the page flow must be smooth.

6.2.1 Polish the Existing Website

Before conducting any future studies on this website, it is vital to fix all the trust busters mentioned in the previous section and make *My Wireless Advocate* flawless enough to be measured against a production standard. In general, consumers liked the unique features offered by *My Wireless Advocate* once they were understood, so it is crucial to find a way (textual or graphical) to better describe these concepts to the general consumer base. Specifically, the following issues should be addressed:

"Create your own plan" should be converted into an attribute elimination model similar to what is offered by LetsTalk. In order to do this, the existing database needs to be updated to include all carriers and plans both local and national, and the input fields

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should be better designed to allow bigger ranges of choices and more optional features. Initially, all plans are presented to the consumers, and the list of matching plans is reduced as consumers enter more search requirements. At any time during this process, consumers can choose to compare these matching plans side-by-side in detail to learn more about them. If no matching plan is found due to peculiarities of the user input, Qwest can offer its Customized Plan and design this plan in collaboration with the user. This way, consumers can benefit from a tailored plan, while Qwest can learn from the unmet consumer needs to help them design their next generation of products and services.

The "retroactive pricing" feature needs to provide consumers with a better description of its services and refund policies. For example, through textual and graphical enhancements, the website should provide users with reasons behind a refund, the source of the refund, and a better estimate of the refund (including taxes and surcharges).

The "name your price" feature should address consumers' concerns regarding hidden charges and contract terms. It might also be a good idea to combine this feature with the "create your own plan" feature to offer a comprehensive tool that allows consumers to filter plans by both usage and budget.

On top of these features adjustments, more thought needs to be put into the quality of advice and suggestions from the different advocate personae to make them seem more realistic to the consumers. Moreover, it is best to include a mission statement on the front page of the website stating the sponsoring company's intent and promise, as well as third

party certification of complete and unbiased information and advice. Finally, all the broken links and dead-ends need to be fixed, and the depth of all paths need to be increased in order to provide a more complete feel to the website.

6.2.2 My Wireless Advocate Enhancements

Upon receiving the complete code base and documentation of the version one prototype of *My Wireless Advocate*, Qwest is encouraged to implement a production quality website and release it to the market. Meanwhile, the MIT team will concentrate on designing the version two enhancements of *My Wireless Advocate*. The focus of these enhancements will be around community and collaboration, with additional research possibilities for added advisor features.

Community is an important factor in building consumer trust and advocacy over the Internet. It encourages consumers to revisit a website for frequent updates such as reviews and comments from their peers. People have a natural tendency to develop emotional attachments to a website on which they frequently contribute, therefore community is an area of high research interest for version two of *My Wireless Advocate*. Some community building features worth exploring are consumer networks and collaborative filtering. Consumer networks allow consumers to identify with other consumers who share the same interests or lifestyle. And collaborative filtering gives each community the power to filter out irrelevant information and unwanted advertisements. Through more traditional methods of communication such as online forums and live chats, consumers can further share good and bad personal experiences

with one another. The detailed design specification for the community feature of *My Wireless Advocate* can be found in Tables 8.

Community: this website can offer consumers a place to form communities, where they can learn and receive advice from one another.

> Consumer networks and associations
  - Consumers can form and join consumer associations through the website
  - Consumer associations can work with policy makers to set new rules and standards for wireless service providers
> Live chat sessions
  - Consumers can receive advice from one another or possibly a moderator in a timely fashion (instead of waiting for e-mail or forum correspondences)
> Forum postings
  - Consumers can post questions and answer other people's questions
  - Consumers can poll other consumers' opinions on certain services or products
> Collaborative filtering
  - Community members with similar interests can set up collaborative filters by providing recommendations and condemnations based on statistical matches of people's tastes.
> Spreading news
  - Consumers can choose to receive email notifications of bad products and services that they should avoid

Table 8: Added Community Feature

Another possibility is to explore enhancements to the current wireless advocates. As mentioned earlier in section 3.1, an advocate is only trustworthy if people believed that there exists a real person behind the online persona. In order to make the wireless advocates seem more realistic, artificial intelligence techniques such as decision trees and natural language processing can be incorporated into the design. These enhancements can be highly effective in building trust with the users through providing intelligent, context-aware answers to free-format text questions. Furthermore, voice and affective

computing methodologies also present an opportunity for embedding the next generation

of online trust on corporate websites, which can possibly bring higher satisfaction to

consumers online. Table 9 provides the specification for the enhanced wireless advocate.

Enhanced Advocate: this website can choose to implement an enhanced trust based
advisor using AI techniques and/or affective computing strategies

> Artificial Intelligence
  • Voice – an advisor that can speak to the consumers to introduce new products,
    explain glossary terms in a conversational way, and guide users through the
    navigation of the website
  • Natural language processing – an advisor that can answer questions based on
    users' free-format text inputs
> Affective computing methodologies
  • Designing a relational agent that builds and maintains long-term, social-
    emotional relationships with its users

Table 9: Enhanced Advocate Feature

6.2.3   Advanced Research

The goal for the next phase of this project is to test the production website on a greater

magnitude with a fully representative study group. Both concept tests and sequential in-

market tests can be performed with up to 1000 participants from the Harris Panel to

obtain a broader spectrum of opinions and feedback. This study would follow current

and prospective wireless consumers for a period of 6 months, during which participants

in different cells will be given combinations of different treatments. These treatments

include: browsing various wireless websites, utilizing online search and comparison

tools, interacting with online advocates, visiting local retailers, participating in online

communities, and using call-centers for after-sales support. The participants' purchase

activities can be monitored, and monthly surveys can be used to determine their overall

trust in various online wireless services and their change in perspective over the period of

the research.

Chapter 7

Conclusions

There are three marketing strategies that fall on different levels of the trust dimension: push-based marketing, relationship marketing, and trust-based marketing. This thesis focused mainly on the shift from traditional push-based marketing toward trust-based marketing as a result of increased consumer power. A good example of this shift is the wireless communications industry, an industry that has traditionally relied heavily on push strategies, but is starting to look into more innovative ways of managing their products and services in order to deal with increased competition. In order to better study the applicability of consumer advocacy concepts in the wireless industry, the MIT e-business Center developed a proof-of-concept functional website, *My Wireless Advocate*, during a one year research project with Qwest Communications International, Inc. This research prototype was tested side-by-side against production level websites such as Verizon Wireless and LetsTalk.com for usability and concept through a preliminary focus group study consisting of MIT students who were also current or prospective customers of wireless products. Even though the study was limited in scope, it was an excellent learning process, and provided great insights into key issues in design, major trust busters, and people's perceptions of trust.

In summary, *My Wireless Advocate*'s prototype status hurt its ratings considerably. However, even with unintentional trust busters associated with an incomplete site, *My*

Wireless Advocate still consistently outranked Verizon Wireless as the second most preferred wireless research and shopping website among the presented options. The results indicated that consumers are ready for more trust-based business models in the online wireless industry. From the focus group discussions and individual participant's feedback about LetsTalk and *My Wireless Advocate*, it can be concluded that consumers liked the concept of advocacy, and that the Qwest project is definitely a step in the right direction.

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Appendix I: Sample Detailed Features Analyses

			AT&T Wireless	LetsTalk.com
Criteria:				
1.	Information			
	a.	Wireless plan information	YES	YES
	b.	Phone specs	YES	YES
	c.	Coverage maps	YES	YES
	d.	Best price guarantee	NO	NO
	d.	Store Locator	YES	NO
2.	Education			
	a.	Glossary of terms	YES	YES
	b.	FAQ	YES	NO
	c.	Pop-up definitions	YES	YES
	d.	3rd party data	NO	NO
	e.	Guides, demos, tips, etc.	NO	YES
3.	Advise			
	a.	Choice advisor / Recommendations	YES	YES
	b.	Rate Plan comparison	YES	YES
	c.	Rate Plan comparison w/ existing plan	NO	YES
	d.	Phone Comparison	YES	YES
	e.	Reasons to buy	YES	YES
	f.	Consumer opinions	YES	YES
	g.	Community	YES	NO
	h.	Personalized plan	NO	NO
	i.	Include all plans	NO	NO
	j.	Unbiased advise	NO	YES
4.	Trust characteristics			
	a.	Touch and feel – user friendliness	-	-
	b.	Navigation	-	-
	c.	Transparency	-	-
	d.	Company profile information	YES	YES
	e.	Privacy policy; Terms and conditions	YES	YES
	f.	Site security information	YES	YES
	g.	TRUSTe privacy statement	YES	YES
	h.	CTIA Consumer Code for Wireless Service	YES	NO
5.	Service			
	a.	Live support - Chat with a sales person	YES	NO
	b.	Newsletter (Promotions, products, services)	YES	YES
	c.	Text messaging (Messaging center)	YES	NO
	d.	Downloads (Ring tones, icons, games)	YES	NO
	e.	Exit surveys	NO	NO
6.	Purchase			
	a.	Registration (my account)	YES	NO
	b.	Shopping card	YES	YES
	c.	Online transactions	YES	YES
	d.	Shipment information	YES	YES
	e.	Tracking order status	YES	YES

Appendix II: Focus Group Questionnaire and Consent

Thanks again for being a part of the "Adaptive Site Experimentation and Strategic Trust Audit" Research Project.

Please answer the following questions. This survey should take around 5 minutes.

Please provide the following details about your current wireless plan:

1. Current Provider:
- ❑ AT&T Wireless   ❑ Cingular Wireless
- ❑ Nextel   ❑ T-Mobile
- ❑ Verizon Wireless   ❑ Sprint
- ❑ Other (please specify) _____

2. Number of Anytime Minutes: _____   ❑ Do not know

3. Average Monthly Bill: $ _____   ❑ Do not know

Now, we would like to learn about your shopping behaviors.

4. Have you researched or purchased a wireless plan on the Internet?
- ❑ Yes
- ❑ No

5. How would you research for a future wireless plan?
- ❑ I go directly to the wireless carrier web site.
- ❑ I search for wireless information (e.g., plan specification and user reviews) on independent sites (such as epinions.com or letstalk.com).
- ❑ I prefer shopping in physical stores.

6. Please **rank** the three sites you have seen in this study according to the following characteristics (please indicate the rank (1, 2 or 3) in the boxes):

	My Wireless Advocate	Verizon	Letstalk.com
Helpfulness in the shopping process			
Ease of navigation			
Trustworthiness in providing unbiased carrier/product information			
Provides the best tools for finding a wireless plan			
Reflects my needs and interests			
Personal and friendly			
Preferred site to research/buy my next wireless plan			

The following questions are about the "My Wireless Advocate" site:

7. Please **rate** the "My Wireless Advocate" on the following characteristics, based on your experience.

(1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither agree nor disagree, (4) Somewhat Agree, (5) Strongly Agree

I enjoyed the overall experience of the site	1❑	2❑	3❑	4❑	5❑
I found it easy to understand and use the features	1❑	2❑	3❑	4❑	5❑
I found the site trustworthy and credible	1❑	2❑	3❑	4❑	5❑
I found it helpful in the wireless plan shopping process	1❑	2❑	3❑	4❑	5❑
I could easily navigate through the site without assistance					
I would be confident in the advice given on this site	1❑	2❑	3❑	4❑	5❑
I found the amount of information clear enough to understand the features	1❑	2❑	3❑	4❑	5❑

Feel free to elaborate on any of the above statements in the space provided below:

_____
_____
_____
_____
_____
_____
_____
_____

8. Did you understand the concept of **"Create Your Own Plan"**?

1❑	2❑	3❑	4❑	5❑
Hard to Understand/ Confusing		Neutral		Easy to Understand

9. How helpful was the **"Create Your Own Plan"** feature?

1❑	2❑	3❑	4❑	5❑
Not Relevant/Helpful		Neutral		Very Relevant/ Helpful

10. Did you understand the concept of **"Retroactive Pricing"**?

1❑	2❑	3❑	4❑	5❑
Hard to Understand/ Confusing		Neutral		Easy to Understand

11. How helpful was the **"Retroactive Pricing"** feature?

1❑	2❑	3❑	4❑	5❑
Not Relevant/Helpful		Neutral		Very Relevant/ Helpful

12. Did you understand the concept of **"Name Your Price"**?

1❑	2❑	3❑	4❑	5❑
Hard to Understand/ Confusing		Neutral		Easy to Understand

13. How helpful is the **"Name Your Price"** feature?

1❑	2❑	3❑	4❑	5❑
Not Relevant/Helpful		Neutral		Very Relevant/ Helpful

14. Please **rate** the following items, based on your behavioral intent.

(1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither agree nor disagree, (4) Somewhat Agree, (5) Strongly Agree

I would be comfortable shopping at this site	1❑	2❑	3❑	4❑	5❑
I would visit this site to get advice and information	1❑	2❑	3❑	4❑	5❑
I would like to try the new features (Create Your Own Plan, Retroactive Pricing, Name Your Price) offered by this site	1❑	2❑	3❑	4❑	5❑
I would recommend this site to a friend	1❑	2❑	3❑	4❑	5❑

15. Please indicate your overall trust in the **"My Wireless Advocate"** site:

1❑	2❑	3❑	4❑	5❑
Extremely untrustworthy		Neutral		Extremely trustworthy

16. Qwest Communications is the sponsor of the **"My Wireless Advocate"** site. How does this fact influence your overall opinion of Qwest?

1❑	2❑	3❑	4❑	5❑
Negatively	Somewhat Negatively	Does not influence	Somewhat Positively	Positively

17. In a few sentences, please explain what you understand by the term "customer advocacy". How would you describe this concept in general?

_____

_____

_____

_____

_____

_____

_____

CONSENT TO PARTICIPATE IN
NON-BIOMEDICAL RESEARCH

ADAPTIVE SITE EXPERIMENTATION AND STRATEGIC TRUST AUDIT

You are asked to participate in a research study conducted by Professor Glen L. Urban, from the Sloan School of Management at the Massachusetts Institute of Technology (M.I.T.). You were selected as a possible participant in this study because you are a current or potential wireless services customer and a student. You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.

- **PARTICIPATION AND WITHDRAWAL**

Your participation in this study is completely voluntary and you are free to choose whether to be in it or not. If you choose to be in this study, you may subsequently withdraw from it at any time without penalty or consequences of any kind. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

- **PURPOSE OF THE STUDY**

The purpose of this study is to test the usability of some selected Web sites and understand the customers' reactions to specific site features and their perceptions of trust. In the study, you will be asked to make a series of comments about the three Web sites selected for this study. After browsing the sites together, the moderator will facilitate discussions by asking you questions about the sites. You are expected to express your thoughts in an unstructured and natural manner, discussing and interacting with others.

- **PROCEDURES**

This study will be conducted in two parts as described below. In total, the study will take approximately one hour.

Part 1

In the first part, you will be asked to examine three Web sites: Verizon Wireless Web site, LetsTalk.com Web site (independent, third party wireless service provider site) and My Wireless Advocate Web site. We will guide you during this process.

After browsing each of the three sites, the moderator will facilitate discussions by asking you questions about your experience –likes, dislikes and overall impressions, as well as about more specific issues regarding the features on the sites, design, navigation, content, advice, and trust. Each site tour and discussion should take approximately 7 minutes. Here, we would like you to express your thoughts in an unstructured and natural manner, discussing and interacting with other subjects of the study. There are no right or wrong answers.

Part 2

In the second part, having already browsed and discussed about all the three sites, you will be asked questions regarding all the three sites, and be expected to tell your opinions, following the moderator's questions, and making comparisons among the sites. We would like you to evaluate the ideas and concepts on the sites and assess their usability, speaking freely and completely about your opinions and attitudes. There are no right or wrong answers. You are also expected to brainstorm collectively, so that a number of ideas, issues, topics, and even solutions to a problem can be generated through the discussions. Everyone is expected to participate actively in the discussions. The second part of the study will take approximately 30 minutes. The study personnel in research will take notes and audiotape the session in order to document the data.

- **POTENTIAL RISKS AND DISCOMFORTS**
There are no physical or psychological risks in this study.

- **POTENTIAL BENEFITS**
Your benefits in this study will be learning about the state of the art of product advisor tools and trust mechanisms, as well as gaining knowledge of some applications to wireless services.

- **PAYMENT FOR PARTICIPATION**
At the end of the study, you will be made a payment of $20 for your participation in the study. Payment will be prorated for early withdrawal.

- **CONFIDENTIALITY**
Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

The study personnel will take notes and audiotape the session in order to document the data. However, your data will be kept completely confidential by not storing your personal information along with the data. All the subjects have the right to hear the tape and request that it be edited. When the research is completed, the tapes will be archived.

- **IDENTIFICATION OF INVESTIGATORS**
If you have any questions or concerns about the research, please feel free to contact:
Birgi Martin: sbmartin@mit.edu
Sha Ma: shama@mit.edu
Stephen Kao: kao@mit.edu

- **EMERGENCY CARE AND COMPENSATION FOR INJURY**

In the unlikely event of physical injury resulting from participation in this research you may receive medical treatment from the M.I.T. Medical Department, including emergency treatment and follow-up care as needed. Your insurance carrier may be billed for the cost of such treatment. M.I.T. does not provide any other form of compensation

for injury. Moreover, in either providing or making such medical care available it does not imply the injury is the fault of the investigator. Further information may be obtained by calling the MIT Insurance and Legal Affairs Office at 1-617-253 2822.

- **RIGHTS OF RESEARCH SUBJECTS**

You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you feel you have been treated unfairly, or you have questions regarding your rights as a research subject, you may contact the Chairman of the Committee on the Use of Humans as Experimental Subjects, M.I.T., Room E32-335, 77 Massachusetts Ave, Cambridge, MA 02139, phone 1-617-253 6787.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Name of Subject

_____

Name of Legal Representative (if applicable)

_____   _____

Signature of Subject or Legal Representative   Date

SIGNATURE OF INVESTIGATOR

In my judgment the subject is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

_____   _____

Signature of Investigator   Date