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PROFESSOR   : Hans Borgman

STUDENT   : Bish Padhi

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On-line Marketing and its implication on Web Site design for start-up companies

by

Bish Padhi

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Introduction

This paper addresses the issue of understanding of the various components of the business value an organization can derive from using on-line marketing. A framework will be developed of the business value of on-line marketing, showing how they can improve, transform or redefine current products/services offerings, processes or business models of the organization. And how the organization can gain in competitive advantage by use of on-line marketing.

This paper describes the use of on-line marketing technology (using the World-Wide-Web, the multimedia interactive component of the Internet, as the main context) as an enabler to alter current marketing strategies through a case study of designing and hostmg a web presence for a start-up software company

The organization of this paper is as follows:
- Section 1 introduces the expressed needs of a start-up software company to have a Web presence on the internet and a design solution to meet these needs,
- Section 2 presents the framework to help understand the added value of the Web-based strategies and how this framework has been successfully used by various companies through a benchmarking of best practices from the industry
- Section 3 summarizes the merits/shortcomings/applicability of the model developed based on the Web designed for ISC.

Section 1: Expressed needs of the start-up software company

Company Overview

International Software Consultancy (ISC) a fledging start-up company based in Princeton, New Jersey is only four years old but it has impressive ambitious plan. Starting off in 1994 with only a handful of staff and with revenues of $ 500,000 has grown in just under four years to 80 people and with revenues over $ 7 million. ISC is projected to grow to $ 50 million by the year 2000.

The company is a premier provider of custom designed application software for Insurance and Financial services in the northeast USA. Within four years they have been able to show impressive growth due to their keen commitment to "Customer Satisfaction". According to Narayanan the CEO of the company Customer comes first, next to nothing.

Product/Services

Currently the company provides the following services:
- Client Server Application development: focus on Microsoft NT Platform
- Off-shore Application Software Development in Bombay, India
- Year 2000 Conversion
- Training of personnel for application development on the mainframe

International Tie-up

ISC is in the unique position of being able to handle application development by outsourcing the development activities to its partner in India. Through a partnership venture with Leading Edge, a 150 strong software development firm based in Bombay, India ISC has been successful in implementing a variety of sophisticated projects for its client in this country. Currently a team of 20 development staff is working on a variety of projects out of Bombay.

Customer and Competition

Primarily ISC customers are located in close proximity to its headquarters based in the NorthEast. ISC competitors are many and but due to good demand for its services the companies growth has not been limited by competition in any measurable manner. However over the next couple of years competition will definitely be a force to reckon with.

Challenges

As a fledgling start-up with very little resources ISC is beset with many problems:
- **Marketing**: Advertisement dollars are very limited or nearly non-existent. Very little thought has been put into promoting the company and their unique strengths to its prospective customers. Currently word of mouth and reference by clients is the only viable advertisements for ISC and it services.
- **Human Resources**: The company major assets are its people. Analysts, Designers, Programmers are in constant short supply. Inordinate amount of time and effort is spent currently in trying to recruit the right people to fill the many vacant positions in the company. In fact the company has not been to fill up many project position sand that has been a limiting factor in its ability to generate more income.
- **Product Offering**: Currently Web design and hosting of Internet Sites is a fiercely competitive but lucrative business. The company is exploring the possibility of getting a toehold on this business as well.
- **Competitive Advantage**: How can ISC project its competitive advantage to its customers in a credible manner and thereby attracting more business?

Web-based Solution

To mitigate some of the challenges faced by the company wants to set up a Web presence, which at the minimum will achieve the following:

Objectives:
- Be a "Window to the World" and promote the companies Product/Services to prospective customers.

Aid the full "Customer Service Life Cycle" process through Requirements, Acquisition, Ownership, Customer Service Life Cycle and Retirement.
Provide Bulletin Board in a secure manner so that in-house employees will be able to share their project experience with others working on, or have had past experience of encountering similar problems
Disseminate corporate information and news.
Public Relations: News clippings.
Create a Forum for prospective Customers to exchange views and experiences in the niche financial market with each other's and with ISC.
Attract potential employees by posting employment opportunities within the firm and offering a means of posting of resumes directly to the company.

Section 2: Framework

In this section attempt will be made to:
- Define what is on-line marketing
- Develop a framework of business value which a company can derive through its Web presence
- Use the framework developed to design the Web presence for ISC

2.1 Definition of On-line Marketing: On-line marketing can be defined as "the buying and selling of information, products or services via computer network"[1]. We could extend the definition by including the "support of any kind of business transactions over a digital infrastructure". These matches with the broader use some companies do of on-line marketing. For example, Dell Computers, a manufacturer of desktops and high-end servers, uses its presence on the World-Wide-Web as a way to provide information to its customers (e.g., access to product brochures and price information), as a marketing tool e.g., allowing a customer to contact sales office), as a sales channel (e.g., on-line ordering of hardware/software products) and as a support line (e.g., making available software patches and frequently asked questions and answers). Another example is the recent introduction by Wells Fargo of financial banking transactions over the Internet.

Seen from a buyer-seller prospective, and using the Customer Service life-cycle model [2] on-line marketing can be used in all the phases:

4
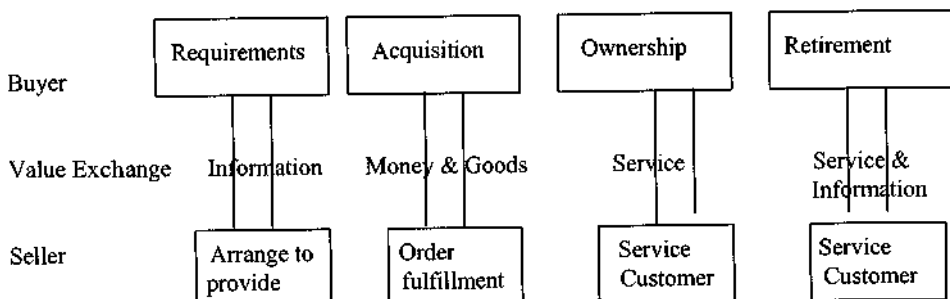
Features of On-line Marketing

On-line marketing can be of significant value for customer management strategies, mainly because it:

- Directly connects buyers and sellers
- Support fully digital information exchange between buyer and seller
- Overcome time and place limitations
- Support interactivity and therefore can dynamically adapt to customer behavior
- Can be updated in real-time, therefore always up-to-date.

Value addition due to On-line Marketing

We have many skeptics who are really not convinced by the value addition nature of on-line marketing. They believe that companies are investing resources in the World-Wide-Web today, hopefully to reap benefits in the not so distant future.

The objective of this paper is to demonstrate the value the company can derive today from using on-line marketing and designing and creating a Web presence using this value framework. This belief is supported by predictions of consultants such as McKinsey, which predicts that on-line marketing will be a US $ 4-5 billion market by 2003. Companies such as Silicon Graphics are also a living proof of the value of such projects: with more than 15,000 users visits a day, the brand awareness and communications possibilities created by their Internet presence would be unachievable by any other means, with a similar advertising budget.

A consulting firm has recently published a study outlining the shakeout expected in the Internet industry in the near future. Their arguments are that too many companies started investing without first having a sound business strategy. As the costs of running on-line presence increase, companies would abandon the Web, as they cannot find enough business justifications to maintain their presence. A clear strategy has to be shaped before investing in the Web. Key to this strategy is to understand the value part of the cost-benefit analysis. The framing of the value is the objective of this paper and its impact on Web design.

Technologies and convergence with business drivers

The technologies that are of primary importance are not limited to the Internet and the World-Wide-Web. These are obviously the most widely used today in the consumer on-line marketing systems. We could consider all interactive media technologies, i.e., the combination of intelligent devices, supporting multi-media data (text, sound, pictures, video, etc.) connected to an open network.

The drivers for on-line marketing are both technological and business oriented.

2.2 Impact on market strategies and business value framework

This section introduces the business value framework and is illustrated through benchmarks and best practices from the retail, banking and travel industry.

Business Value Framework

This section presents a framework detailing the value of on-line marketing, especially the World-Wide-Web component of the Internet, for commercial organizations dealing with customers. The most widely used yardstick used to determine the value of the Web is to look at the potential of selling products or information on-line. However restricting the value to direct sales only ignores a major part of the business value. Evaluated by direct sales only, the Internet as a distribution channel cannot compete toady with other direct-marketing channels. It is estimated that, in the US, sales on the Internet in 1995 totaled US $ 200 million, while conventional direct sales (by catalog, phone, TV) totaled US $ 60 billion. Making money from direct sales is certainly the first way of getting value out of on-line marketing. Nevertheless, there are many others. The following table describes the components of the business value:

The Organization Source of Business Value

Improve Process / Products / Services	- Product promotion strategies - Distribution channel exploration - Product Pricing - Shorten Time to Market - Efficient Customer Service and Support - Improving Brand Image
Transform Process/ Products / Services	- Organizational learning - Customer relations improvement
Redefine Process/ Products / Services	- New Product/Services Capabilities - New Business Models

Product Promotion Strategies

Through a direct, information-rich and interactive contact with customers, on-line marketing can enhance the promotion of products and services. The first use of on-line marketing is to provide product and services information to customers, through on-line electronic brochures or buying guides. This can be seen as additional marketing channel, allowing to reach a maximum number of customers. The advantage on-line marketing is its ability to deliver product/service information anytime, anywhere, provided the customer has the right infrastructure (e.g., PC, modem, on-line service) to access this information. Using the Web allows for interactivity and customization. Different ways to customize the advertising content, based on the customer profile or input, are to change the content description (simple or complex), display only a range of products/services which are relevant to the particular customer, change the price (e.g., discount for club

members), and to change the path used to navigate within the service.

For instance, an electronic supermarket could provide different graphical user interfaces for kids, teenagers or housewives, with a look appealing to each of these market segments. The advertisements appearing on the pages could be geared towards the specific segment for example toys for kids, music CD's for teenagers and jewelry for housewives. This is coherent with trends in marketing, such as micro-marketing or one-on-one marketing which try and target each consumer with a specific message, according to his/her needs and desires.

A good example is Hewlett-Packard and its "reference guide to buying a printer"; the system asks the customer to identify his/her needs (e.g., price range, need for color, etc.) and presents a customized version of the catalog, selecting only the printer models which meets the stated needs. In the service industry, Wells Fargo bank enables the customization of its "home page" on the Web, allowing the customer to bundle all the information services the bank provides in one convenient, easy to access page.

In a world with products becoming increasingly harder to differentiate, shrinking life cycles, an abundance of traditional media messages and customers having too little time, on-line marketing offers an opportunity for new promotion strategies, enhancing the branding of products. As such, the quality of the "advertisement" is the primary value in product promotion.

Distribution Channel Exploration
Because of the direct reach to customers and their bi-directional nature in communicating information, on-line marketing represents a new sales channel for existing products and services.

Considering on-line marketing, and in particular the World-Wide-Web, as a distinct sales channel makes sense in two kinds of products:
- Physical products, sometimes also sold in conventional stores, which can be advertised and/or ordered on-line, such as computer hardware or wine
- Products and services which can additionally be delivered over the Web, such as information or software.

Examples of the first type are the so-called electronic catalogs such as the Internet Shopping Network, selling all sorts of electronic and computer related goods, or Virtual Vineyards, selling wine and food products. These catalogs offer information on the products, support on-line ordering and payment, and sometimes on-line customer service.

On-line marketing strategies are of primary value in markets where information is of significant added value to the products being bought, rather than in commodity markets.

For example, in the wine industry, information on the winery, the type and quality of the wine, or the food it goes well with are of significant value to customers, and usually hard to find and get through the traditional sales channel (e.g., supermarkets, liquor stores, etc.) Centralizing this information digitally is therefore of significant value to the customers.

The right packaging of information supporting the buyer's decision can also be a significant advantage. For instance in the case of <u>Peapod</u>, an "on-line grocery" selling traditional supermarket products through a computer interface, the ability to store shopping lists, recall them and modifying them significantly decreases the time a customer needs to do his/her shopping, therefore adding to the perceived value for the service. Similarly, the ability of the shopping software to automatically propose a substitute item with a reduced-price of to offer a coupon adds value by reducing the final bell. These features are only possible when all the information used in the purchase is digitally available and processed.

In case of information products, the on-line marketing actually becomes the delivery medium. As such, an electronic newspaper does not use paper anymore and can be fully digitally delivered. In some cases, for instance <u>ZDNet</u>. a service reporting on the computer industry, there is actually no paper version of the service. In another case, <u>software.net.</u> a company selling software, currently sells more than 300 packages which can be delivered digitally and used literally minutes after buying them.

By extending the notion of selling "informated" products, we see new product categories emerging. For instance [3], referred to four ways of making money on the Web, the two last ones being new form of products:
• Direct selling (i.e., selling products)
• Content selling (i.e., selling information)
• Advertising (i.e., giving out information such as news or directories for free, to drive traffic and sell to advertisers)
• Transaction and links (i.e., charging a fee for a transaction, such as selling an airlines ticket on-line, or charging to link with a service provider, as in a yellow page service).

Product Pricing:
By using a public shared infrastructure such as the Internet and digitally transmitting and reusing information, on-line marketing systems can lower the cost of delivering information to customers.

By sharing a digital infrastructure such as the Internet compared to owning a physical one, marketing, distribution and customer service costs can be drastically reduced.

By using automated systems and a digital transmission architecture, personnel, phone,

postage, and printing costs can therefore be reduced. This is especially important in service industries, where the cost of customer service usually exceeds the product costs (e.g. for banks, credit card or telecommunications companies). Checking order status, getting a usage statement or a bill are examples of activities, which can be delivered much more cheaply, using on-line marketing. In each case, the customer value is also higher, through a quicker reporting, or through the added information value (e.g. delivering not only a statement, but also historical statistics or graphics, adding advice to reduce
some of these costs, etc.)[3].

Shorten Time to market
Due to their instantaneous nature, on-line marketing systems allow a reduction of the cycle time associated with producing and delivering information and services.

In some markets or for some products, the ability to distribute or receive a product as soon as it's been created is of primary importance. This is obviously the case of information distribution. A Company such as C/Net, for instance, distributes information on hundreds of topics using electronic mail or the Web, to make sure it reaches its targets (usually decision-makers in corporations) as soon as it is available.

In the financial market, which very often leads the way in terms of complexity of the environment, some financial products (usually derivative contracts) have return on investment in a matter of hours. Their life cycle is often not much longer. It's in this type of environment, which will increasingly become routine for other industries, that the speed achieved by on-line marketing to quickly gather information on customer needs, assemble a product by adapting existing ones or assembling building blocks and distributing them will become critical. Linking network of companies, each doing part of that assembly work, is currently a growing research area [4].

Efficient Customer Service and Support
Through intelligence built into systems and the extended availability of intelligent support systems, on-line marketing can enhance customer service.

As already mentioned the case of Silicon Graphics and Sun Microsystems using the Web to provide customer support. The ability to provide on-line answers to problems, through resolution guides, archives of commonly encountered problems, electronic mail interaction (and in the future audio and video support), and all that 24 hours a day, 365 days a year, builds customer confidence and retention. Monitoring how customers use this support information also provides insights on improvement areas in current products and the list of issues encountered with products can be a significant source of product feedback for the design of new products. As consumers start using these systems in growing numbers, industries other than software will take note of these opportunities and

deliver on-line customer service. Today, <u>Wells Fargo</u> Bank is an example of a bank offering on-line statements and answering electronic mail queries on bank accounts.

Two likely developments in this area are
- Products which diagnose themselves, and use an on-line connection to call a support specialist which can arrive on-site, either physically or electronically, with the full knowledge of the problem that needs fixing
- Knowledge-based systems which assist customers in finding solutions for their problems.

Both have already been seen in specialized fields (such as high-end copiers from Xerox, mainframe computers from IBM or minicomputers assembly from Digital), but are likely to become accessible to a broader range of customers and for a wider range of products.

Improving Corporate Image
On-line marketing will become one of the components of a brand or corporate image, especially while targeting technology-friendly customer segments.

This might be one of the most intangible aspects to measure, but building a brand or corporate image is of prime interest in some industries, those with commodity products or high competition. For instance, in the soft-drinks industry, Coca-Cola and Pepsi spend huge amounts of money to try to differentiate basically similar products (or to take a less controversial example, AT&T, MCI and Sprint in the telecommunications business). Others, such as Levi-Strauss in the fashion industry compete with others in being seen as young, fashionable and "hip".

All of these brands use their Web presence as a way to affirm their corporate identity and their brand image, in addition to providing product
information, etc..

Organizational Learning
Rapid progress in the area of on-line marketing will force companies to adapt quickly and offer them an opportunity to experiment with new products, services and processes.

It will have a large and durable impact on the strategies of most organizations. Therefore, it is critical that these organizations quickly become familiar with the technology. The learning curve of mastering such technologies, and understanding their power to reshape customer relationships, is steep and can't be achieved overnight. It is very often an iterative process, requiring organizations to try new offerings, and tweak them according to customer feedback.

In a similar fashion, new technologies require new organizational approaches. For

instance, the structure of the group dealing with on-line marketing might have to be different from the one typically used in the organization, in order to be more flexible and responsive to the market, or new processes have to be put in place, for instance to deal with the authorization of publishing corporate information on the Internet. This type of corporate change needs to be planned and managed, and before getting it right, organizations might have to struggle with different experiments.

The value of both types of learning resides in the new capabilities the organization acquires, and the potential of using these capabilities in the future, as the market develops and customer expectations become clearer. The product and process innovation, which appears in one corporate division, is also positive, as it can be reused across divisions if success is achieved.

Customer Relationships Improvements
On-line marketing will allow for more personalized relationships between suppliers and their customers, due to their ability to collect information on customer's needs and behavioral patterns.

According to Rayport and Sviokla [6] "in today's world of overcapacity, in which demand not supply, is scarce" there needs to be a shift from supply-side to demand-side thinking, and organizations need to "sense and respond" to customers' desires rather than simply make and sell products or services. The focus is therefore on establishing relationships with customers, based on learning their needs and desires, proposing the right products and keeping these relations active throughout the years.

The role of technology in learning about customers is its ability to record every event in the relationship, such as customers asking for information about a product, buying one, requesting customer service, etc. Throughout all these interactions, either over the phone, in person or on-line, the needs of the customer are identified and will feed future marketing efforts [7]. For example, if we use the example of the on-line travel agency, its ability to store and remember customer habits (e.g. always flies out of this specific airport, likes window seats and requests vegetarian meals) and particular data (e.g. frequent flyer numbers, preference for a particular rental car company, etc.) will establish a relation where the customer feels particularly comfortable in dealing with this particular travel agency.

All that data acquired about customers also allows provides a switching barrier, as customers would have to "teach" a competitor all that information. Moreover, a historical analysis of the data will reveal who are the most profitable customers (usually 20% of a company's customers generate 80% of the benefits) and products, therefore allowing to reduce the scope of products, to focus on the most profitable ones, and extend a product line by adding products likely to cater to the needs of these most profitable customers.

Then, by understanding the segment of customers, which are most interesting, specific marketing efforts can be targeted to similar individuals, currently non-customer's [8].

Becoming a trusted partner of a customer is key in maintaining these relationships. It can be achieved by providing him or her with valuable information. That pro-activity is likely to generate additional sales volume. Pro-activity is the ability to use the direct channel with the customer to inform him of specific offers, which would match his/her needs, and buying patterns. For instance, early in the summer, you would propose special offers to a customer who's used to buy swimming suits through an on-line catalog. This could be done by an electronic mail sent to the customer's address, with a link to a specific page of the electronic catalog, and maybe a discount coupon to thank him for his loyalty.

Amazon, an electronic bookstore on the Web, currently uses another example of such a strategy. Amazon allows its customers to program agents, which will send them relevant information. Let's suppose you're looking for a book on technology and strategy. Amazon will provide you with a list of the existing books, but also offer you to keep your request "in mind", and send you information on titles published as they arrive. This information is sent through electronic mail and links with the on-line bookstore.

What on-line marketing brings as a lever to such strategies is the automation of the customer profile, his needs, buying patterns, etc. All that data can then be analyzed through computer applications and the right answer chosen. Therefore, personalized service strategies, which were before only achievable with a small number of customers suddenly, become possible on a wide scale. For instance, in the past, the corner video-rental storeowner might well have known your viewing preferences, and therefore advice you on new movies, but only through automated systems do this strategy stay feasible on a large scale. In this video example, a national chain could use that system to differentiate itself and increase customer retention by maintaining a global database of customer preferences. If you moved to a different city for instance, you would still be able to insert your membership card in a multimedia kiosk and get advice on which new rental choices better suit your taste.

Creating New Product/Service
The information-based nature of the on-line marketing processes allows for new products to be created or existing products to be customized in innovative ways.

A large source of the business value on-line marketing can provide comes from changing the products themselves, in addition to the way they are advertised, ordered or delivered. This is mainly due to the potential of collecting information, which will be used to customize products.

Mass customization has been used for some time now [9]; it endeavors to create specific

products for each customer, based on his or her exact needs. For instance, thanks to an information network and advanced production techniques, Motorola is able to gather customer needs for a pager, transmit them to the manufacturing plant, manufacture a specific model (varying the form factor, color, features, etc.) and send it by overnight mail, all that in a few hours. Levi's, the jeans manufacturer, has brought similar techniques to the apparel industry [10], with the ability to custom produce a pair of jeans, based on specific customer requirements, thanks to an electronic network linking the retail shop (where the customer chooses the type of jeans, and her measurements are taken), the producers of the various parts of the jeans, the assembler and the shipping company. In both of these cases, the key is the ability to store customer preferences, use a flexible manufacturing technique to adapt a product to their particular needs and operate a network of suppliers, which will join together to manufacture and deliver a product.

In the future, on-line marketing links between customers and suppliers will suppress the need for an infrastructure to gather customer data (a shop in our case) and will allow customers to do it from home, their office or on the road. This direct link also allows the supplier to gather very detailed data on customer profiles, their needs, patterns of buying, etc. Database marketing techniques [11] can then be used to analyze this data, in order to improve new product development and target specific offers to certain customers. Gateway 2000 is a good example of a supplier custom-manufacturing personal computers, and offering product information which can be adapted to personal needs through their Web site.

Another opportunity in mass customization is to have the customer design part of the product himself. For instance, we could imagine a watch manufacturer with advanced production techniques, such as Swatch, providing its customers with computer-based tools allowing them to design part of the watch (e.g. the drawing on the background of the watch) and send these designs through a computer network to the watch manufacturing robot, before shipping the personalized watch to the customer. The ability to sell unique-design watches to customers at a retail-like price would be a great differentiating factor.

This creates a paradigm shift in the design of products, which is not perceived by every actor today. For instance, the Credit Card Network is a Web site, which basically lists different types of credit cards, offered by US banks, both on-line and off-line. All of these cards offer different features, such as interest rate, membership fees, credit limits, insurance, assistance programs, frequent flyer bonuses, etc. The customer is asked to look at the different offerings, and then choose the package which best conforms to his or her interests. It seems that the business model of this service could be changed, to take opportunity of customizing products. We would envision a service where the customer would be asked to check the features which matter most to him/her (e.g. a frequent traveler paying his invoices in full every month might choose only frequent flyer bonuses

and rental car insurance). A custom credit card package could then be designed especially for this customer, who would receive exactly the features he asks for, and no more, therefore avoiding to pay fees for services he doesn't use. The interest rate or annual fee would be adjusted for each customer, based on the services that need to be provided and the expected revenue for the credit card Company. This is similar to the Swatch example above, in the sense that the customer designs the product he wants to buy.

Establishing New Business Models
Changing industry structures and on-line marketing systems allow for new business models, based on the wide availability of information and its direct distribution to end-customers.

Going further than new ways of selling existing products or services and the opportunity for new ones, we also see new business models emerging. Key among these new business models are new forms of intermediaries, or information brokers. Although it is true that on-line marketing will disintermediate some industries, by directly connecting buyers and sellers, we envision new opportunities for actors repackaging information. The early examples are currently the directory providers or the search engines, such as Yahoo & Lycos. Also, in the car industry, Dealernet offers comparisons between any type of car, with pictures, product specifications and third-party reviews.

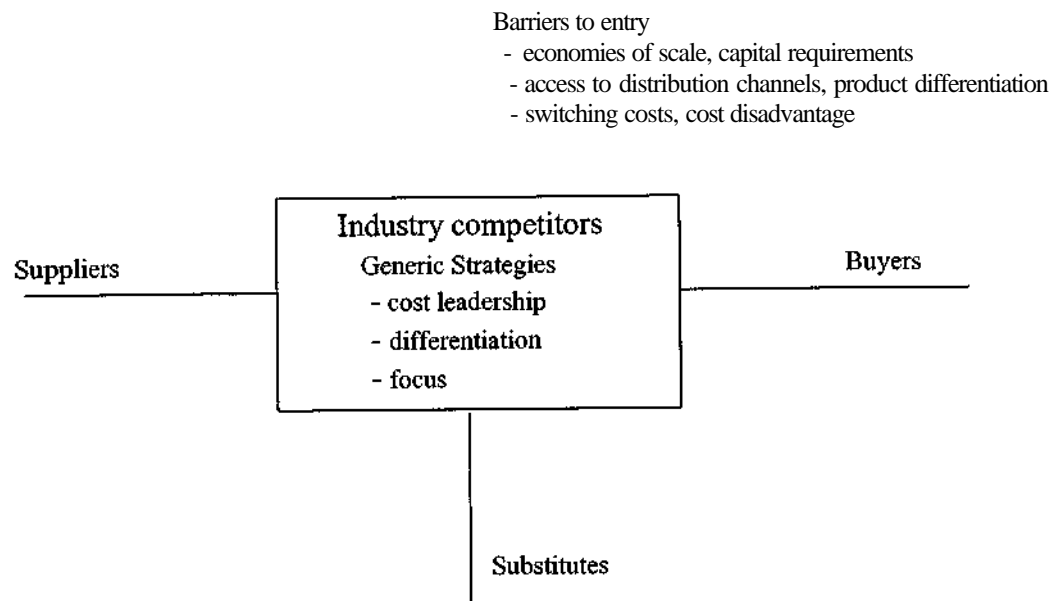**On-line marketing and competitive advantage**
After looking at the sources of value of on-line marketing for an organization, this section explores the effects of on-line marketing and its potential for competitive advantage. For this I have used Michael Porter's seminal work [12] on industry analysis as a framework, and map our business value components to Porter's
- Three generic competitive strategies for a company;
- New entrants and substitute products;
- Value system analysis, with the pressures from suppliers and customers.

We then discuss pure price competition and strategic disadvantage.

Porter's framework   New Entrants

Barriers to entry
- economies of scale, capital requirements
- access to distribution channels, product differentiation
- switching costs, cost disadvantage

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                    ┌─────────────────────────┐
                    │   Industry competitors  │
  Suppliers ────────│   Generic Strategies    │──────── Buyers
                    │    - cost leadership    │
                    │    - differentiation    │
                    │    - focus              │
                    └───────────┬─────────────┘
                                │
                            Substitutes
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Porter's analysis framework of competitive advantage

The effect of on-line marketing on the competitive dynamics in an industry can be viewed as:

- Generic strategies of a single company to get a competitive edge,
- Potential for new entrants in the industry and for substitute products,
- Pressures of customers and suppliers on the value system to gain competitive advantage

Generic competitive strategies

Porter's three generic strategies are cost advantage, product differentiation and focus. Focus means concentrating on one segment of the firm's customers and providing them with an extremely well targeted set of products, excellent service, etc.

Using on-line marketing systems on the Internet (or similar systems) ...

- Offers a cost advantage through less expensive product promotion, cheaper distribution channels and direct savings. This emphasizes how the Internet allows small companies to act as much larger ones, by using a "free" or very low-cost infrastructure to promote their products on a global basis. As such, the Web can be seen as a great equalizer, replacing an often-costly distribution network by a public or widely shared infrastructure.

- Helps a company to differentiate itself not only through price but through product innovation, time to market and customer service. Price competition is the subject of section

- Allows for customer focus strategies through better customer relationships. Focusing on a specific set of customers and delivers the best service to them. On-line marketing enables this strategy for a larger number of specific segments, by using information technology for personalized service on a larger scale and mass-customization of products.

New entrants and substitute products
Using on-line marketing systems on the Internet (or similar systems) ...

- Allows easier entry into traditionally hard to access markets, due to less expensive product promotion, new sales channels and reduced capital requirements
- Allows to raise the entry barriers in some markets through extensive customer learning (which makes switching more expensive), product differentiation and experience
- Facilitates the introduction of substitute products in a market due to product innovation.

Pure price competition
This is a form of competition that will emerge in the electronic world with the emergence of the storefronts, offering similar products with various level of services. Let's imagine we have two different on-line travel agencies, both selling airline tickets through the Web. One of them, named ABC, will provide a bare-bone service, offering very cheap tickets to customers who exactly know what they want. The other, XYZ is much closer to our description in the previous section, i.e. it provides the customer with multi-media information on the various products it offers, offers a customized travel plan, etc. In order to cover the costs associated with the development and maintenance of such a system, XYZ has slightly higher prices. The issue is to prevent potential customers from getting information from XYZ, for free, before buying from ABC to take advantage of their better prices. It is an issue that already exists today, although a customer can't regularly request work from a travel agent without buying once in a while.

Strategic Disadvantage
New technologies allow an organization to quickly catch up with its competition. With time, technologies gain maturity, which reduces the cost and effort to implement systems. However, if not used, they can become a potential source of strategic disadvantage. If a company offers services or products through the Internet for instance, and its competitor does not, customers might well switch suppliers, especially in industries where switching barriers are low. For instance, an "early adopter" customer might decide to switch banks if one can offer him electronic banking capabilities, such as electronic bill payment, interactive on-line (therefore always up-to-date) bank statements with statistics or information on companies where he owns stock.

Some large companies are well aware of that phenomenon: when Federal Express launched its Web site (November 1994), allowing customers to track packages on the Web, United Parcel Service. (UPS), its major competitor, quickly accelerated its development efforts, which resulted in launching a similar service, although six months after FedEx. Today, both services are very close functionally. The third major competitor in the express package delivery industry, DHL, plans to have a similar service available mid-1996, having been slowed by technical integration problems.

Although the potential strategic disadvantage for followers is clear, the value of the competitive advantage for the leader is also unfortunately time-limited. The only source of sustained competitive advantage therefore comes from having an infrastructure, both technical and organizational, which allows for continuous innovation, to always be in front of the competition.

Issues In On-line Marketing

This section discusses some pitfalls and issues on the way to on-line marketing, and addresses some potential solutions. For now, we consider them as variables external to our model, but important to our understanding of on-line marketing. Whereas our ten business value propositions require further empirical validation, based on organizations' experiences with the theory and its implementation, the issues covered here require some more conceptual work to be resolved. Future work to test and confirm the value propositions will need to take these issues into account.

In this section, we discuss the following issues:
- customer relations
- privacy and security
- electronic payment systems
- mass-market adoption
- implementation issues
- organizational commitment

Customer Relations

Early experiences with on-line marketing in the banking industry, which has been a pioneer in the use of electronic systems, can be used to leam of some potential dangers and issues to be taken into account. The use of Automated Teller Machines and electronic home banking systems has increasingly allowed customers to bank outside of traditional bank facilities, for most of their usual transactions. This was consistent with the cost-savings strategy of most banks, which discovered that electronic transactions were about seven times less costly compared to the manual handling of these transactions by a bank teller.

Nevertheless, the fact that customers' only contact with their banks was through (rather unsophisticated) electronic interfaces, and the major difficulties in integrating the legacy systems of a typical bank, prevented banks in many cases from selling additional products to customers (cross-selling). In some European markets, the insurance companies took opportunity of that to grab business from banks, selling savings products to customers through their extensive distribution network. Similarly, the decrease in human interaction with customers could also lead to a less sophisticated understanding of their needs, as they're not always able to express comments, criticisms or requests for new products while interacting with machines.

This should lead to a design of on-line marketing systems, which incorporate capabilities for customer understanding and for proactive selling of new products.

Privacy and Security
Another potential source of trouble are customer concerns with privacy and security, which could lead to a backlash against suppliers using such systems, or simply to customers avoiding the use of these systems. Some believe that customers will be reluctant to provide their suppliers with data on their demographics information, buying patterns or product needs. Unfortunately, this data is critical in many of the strategies we described earlier (mass-customizing, customer relations, pro-activity, etc.) There are two ways of handling these concerns, either customers can be made aware of the benefits of volunteering this data (e.g. products better suited to their needs, reduction of the junk mail as commercial offers become closer to their real needs), or material incentives can be offered to customers to attract them. This is already used in contests or coupon offers, and most customers would be ready to volunteer personal data if offered frequent-miles in exchange, for instance.

A widely cited issue with on-line systems these days is security, although many specialists consider it to be a matter of perception rather than reality [13]. Nevertheless, customer perceptions are really what matters in terms of new technology adoption. The only answer, which can currently be given, is that the security of on-line systems is evolving quickly, and that by the time an on-line marketing strategy will be implemented, new technical solutions will have emerged. At this stage, most security systems are good enough to be used for most commercial transactions, and the evolving legislation in the field will allow the development of better systems (i.e. crypto-systems with longer keys) and their export worldwide.

Electronic Payment Systems
Electronic business transactions can only be successful if financial exchanges between buyers and sellers can occur in a simple, universally accepted, safe and cheap way.

Various systems have been proposed, some of them based on traditional mechanisms (e.g. credit cards accounts) while others rely on new designs, such as electronic money. The key here will be to find a few widely accepted mechanisms, which can be used by most actors. The recent agreement between MasterCard and Visa on one security standard for credit card transactions over the Internet, and its backing by most major software vendors is one step in the right direction. This doesn't diminish the need for more specialized systems, for instance to allow micro-transactions, the exchange of very small amounts of money (a few cents) in exchange for information or services. These new payment mechanisms will in turn enable new business models such as pay-per-article newspapers.

Mass-market Adoption

A key to the success of consumer on-line marketing system is certainly a wide customer adoption of such technologies. It is not clear when this will happen and, although there are lots of learning's and benefits to be derived now, the mass-market adoption of such technologies will take a few more years to come.

The following figure shows some of the factors linked to new technology adoption by consumers (the factors adversely affecting adoption are in Italics).
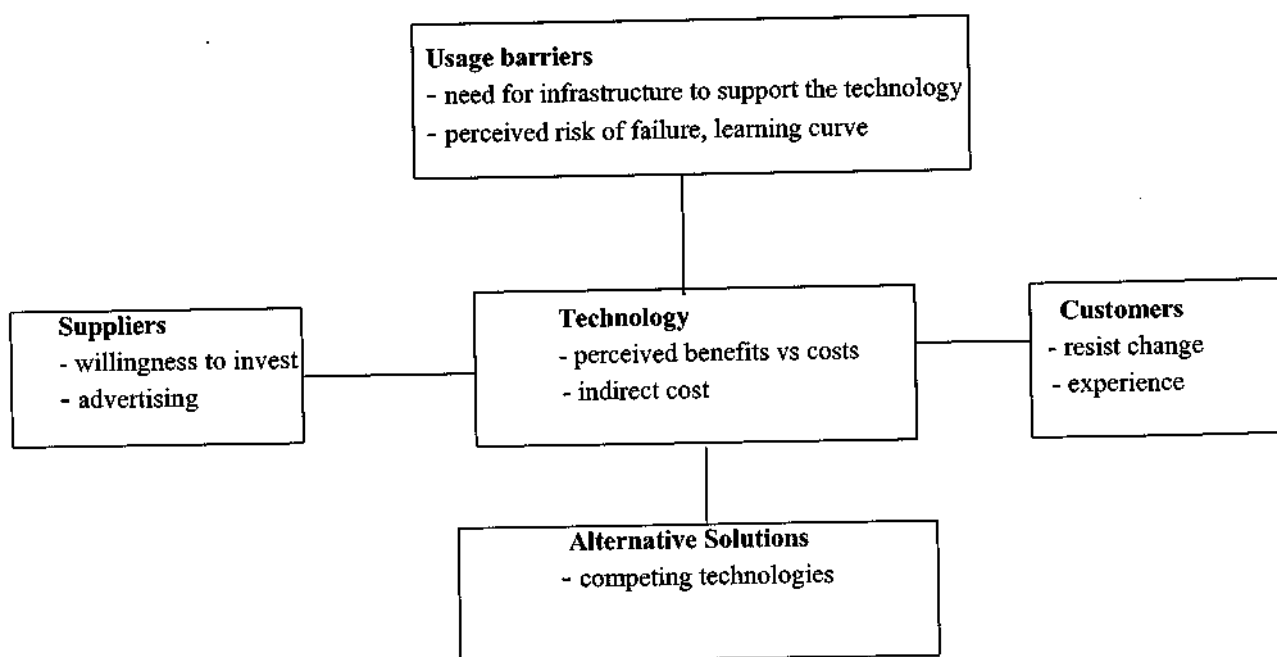
Factors affecting new technology adoption

The reluctance of people to change is certainly a key issue here, as is the availability of appropriate technological platforms in every home. The emergence of the low-cost "Internet computer" and of interactive television will undoubtedly quickly change the

marketplace. As with most new technologies, adoption is linked to the supply of the right products, rather than demand. This is because customers not familiar with the new technologies cannot define their needs, and will understand the technology possibilities only through innovative products.

Implementation Issues

This section discusses some implementation issues and the managerial implications of creating, managing and getting the benefits of an on-line marketing system. Basically, it revolves around the realization that technology alone will not solve issues or create advantages. This technology needs to be integrated in an organization, with the change management issues linked to people resisting new concepts and ideas. It also needs to support a clearly defined and well-communicated business strategy.

We adopt here a summarized model of an organization, and see the alignment between these different components as the main issue in establishing a sustained competitive advantage. Some authors have called this alignment the "fit", and argue that only companies that know how to create this fit and maintain it through various kinds of environmental change will be successful in the long term.
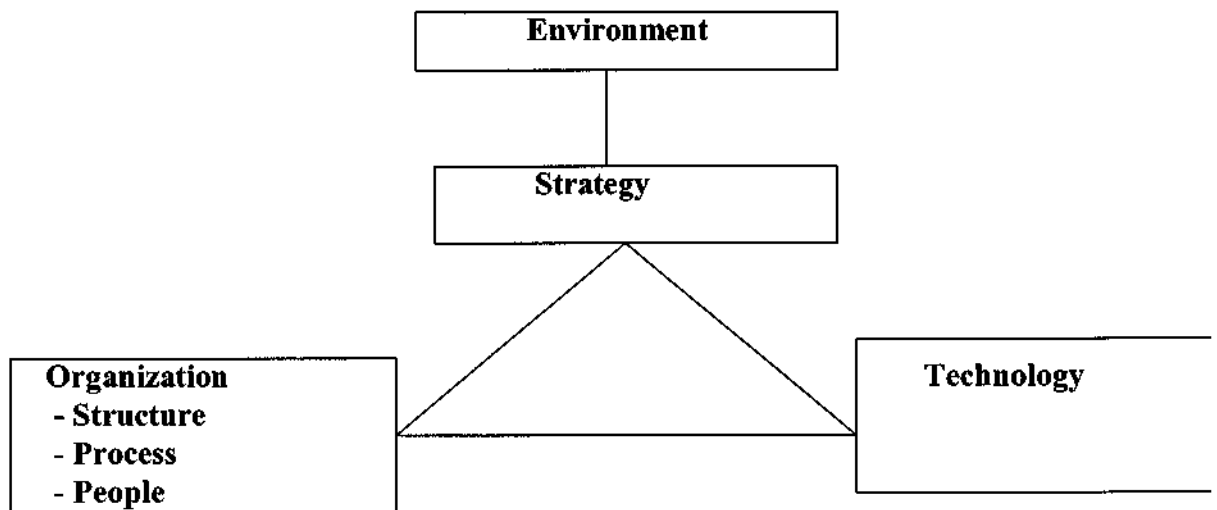
Model of an organization

The issues of alignment or balance relevant to on-line marketing systems are
- between strategy and technology
- between technology and the organizational processes
- between technology and people

The link between technologies and the strategies they enable has been covered earlier. It should be clear by now that these systems can be key in differentiating a company from

its competitors. Nevertheless, technology in itself will not be sufficient to achieve that: the level of service provided to customers and the relationship that can be established with them will be also critical in preventing customers from switching providers. Only when the loyalty of customers will be high, through their investment in the relationship with their suppliers and sometimes the business and technological integration of the supplier in their customer processes, will a sustainable competitive advantage be created.

There are two ways of seeing the alignment between technology and the organizational processes. The first is the need to redefine some processes after the introduction of on-line marketing systems, so that these systems become fully integrated in the way an organization does business. Three examples of such redefinition are:

- When a Web system is used to broadcast corporate information, there is a need to authorize each specific piece (or class of) information which becomes public. Therefore, the process handling corporate communications needs to be refined
- The logistics processes (the back-end) need to be integrated with the on-line ordering systems (the front-end) to provide uniform and seamless service. There is little use for an on-line system if orders have to be manually re-keyed in another system before they can be processed. This often requires integration with legacy information systems
- Whenever customer contact becomes possible through an on-line media, the customer expectations of the company's reaction change. By using electronic mail, which is usually answered in a few hours, a day at the maximum, when dealing with a company, the customer expects a similar response time. But it often happen that questions/comments coming through e-mail take the same path (i.e. process) as written queries, traditionally answered in a matter of days. The advantages of on-line communications therefore disappear.

The other way of aligning processes and technology is to use the latter to enable a redesign of the processes, thereby reducing the cost, time and number of errors associated with the process, while increasing the service level. This is often the focus of business process reengineering methodology [13]

When information technology and processes become fully integrated, one can see the emergence of new business models for companies, "digital companies", i.e. fully integrated organizations fully relying on information technology both for customer interaction and internal management. The Internet Shopping Network and Virtual Vineyards are two examples of such companies, where order taking, inventory & order management as well as financial systems are all tightly integrated.

As the CEO of Wal-Mart, a very large US retail chain says, new technologies need to be aligned with people's understanding and capacity of dealing with them. An example of

the impact on the human resources can be seen while looking at the competencies required by the team designing and implementing an on-line marketing system. This team needs people with a strategic vision, an understanding of the various internal business processes which will be affected, knowledge of the legacy information systems with which to integrate the new systems, a strong technological mastery but also graphical design skills, etc. Therefore, only a cross-functional team including specialized outside partners will be able to successfully lead such a project.

These issues of alignment should be kept in mind while designing an on-line marketing strategy and its implementation plans.

Organizational Commitment

The final issue regards the organizational commitment necessary to successfully run an on-line marketing system. Although it is true that the Web today represents a great way to test some commercial ideas with a low cost of entry, and thus is a great equalizer and a real marketplace for innovation, a working system very soon requires additional resources, in terms of technology and skills (e.g. professional design, integration of legacy systems, process integration, etc.) The experience with the Web shows that most Larger companies have bought systems started by small entrepreneurs, as they needed more resources to expand.

With large actors present on the market, customers become accustomed to increasingly higher quality systems. New technologies, such as interactive "applets" or the integration of audio and video also increase the complexity of developing an on-line presence. The cost of such systems is often an order of magnitude higher than start-up ones. As an example, a popular on-line music store, allowing customers to sample music on-line before ordering, is built using the most powerful Silicon Graphics Web server, uses 400 gigabytes of disk space, and has a hardware budget of roughly half a million US$. The most popular publishing site on the Web today, Time-Warner's Pathfinder, currently employs about 100 people, to develop and maintain its content.

Therefore, a sustained presence in cyberspace requires a strong organizational commitment, to increase the resources devoted to it as success proves the validity of the business model. Increased financial revenues, justifying the additional costs should of course compensate this.

Summary of Framework and Benchmark

The rationale for an organization to build an on-line marketing presence and showed the link with the competitive advantage that could be derived. Then we've showed the implications it had for the management of these organizations and some of the pitfalls they would have to avoid. The key point therefore, is that building any kind of on line

will be used as a reference by maintaining the relationship information in a database. The current Web does not have this functionality it will be incorporated at a later date.

ISC Web Business Value Addition
Evaluation of the designed ISC Web from the value addition framework:

Value Addition to Product Promotion Strategies: ISC Web page has been designed keeping in-mind that the clientele of ISC, all sophisticated computer users will be able to get the following information directly from this Web:
- Product/Service offering
- Off-Shore Product development
- T&M services and
- Year 2000 conversion

Value Addition to Distribution Channel Exploration: Because of the direct reach to customer and their bi-directional nature of the Web. ISC Web page has designed to supplement the existing distribution channel. For ISC T&M effort largely involves placement of skilled analyst and programmers at the disposal of clients. The web is an ideal media to relay this information to clients. The proposal is to give ISC's preferred client's authorization to access the database of analyst and programmers, so that they search for the right candidates with the right skill set. The client can then directly relay their need for this specific individual directly to ISC.

The envisioned database is intended to have the following minimum information about personnel:
- Name
- Education
- Primary skill set
- Years of experience
- Availability date
- Previous client engagements
- Bill rate

The Web will also have the capability of accepting on on-line order for a specific selected candidate. Once this interest from the client is communicated to ISC through the Web. ISC will proceed with formalizing the engagement by following through the following steps:
- Interview scheduling between client and candidate
- Updating candidate availability date
- Maintaining statistics

Value Addition to Product Pricing: As indicated under Distribution Channel Exploration ISC services pricing information for T&M services is intended to be made

available to the Preferred Clients.

This pricing information need not be limited to only T&M type of services but can be made available for all other services of ISC. The pricing which can be published should stress the uniqueness of ISC pricing Vis a Vis its competitors because of its unique advantages.

Value Addition to Shorten Time to Market

The Web page created for ISC will reduce the time to market ISC's T&M personnel. In this instance the entire process of selection of the candidate is done directly by the client through the Web. The time lost in communication between the client ISC will be reduced dramatically because of this.

The Web page is also designed to enable prospective employees to do the following recruitment related activities:
• Post employment opportunities

Value Addition to Corporate Image and Customer Relationship:
ISC customer base comprises of corporations that are high tech. ISC Web page creation is designed to promote a high tech image to its client.

ISC does currently have a steep learning curve of mastering such technologies and understanding their power to reshape customer relationship. This learning cannot be achieved in a day or week. It is very often an iterative process, requiring ISC to many adjustments to their Web and tweaking them to the complete satisfaction of its customers.

Value Addition To Creating New Product/Services: ISC is on the threshold of engaging in web based development. The creation of the Web page is a first step in this direction.

In the near future ISC is getting geared to do the following web based application development:
• Designing of web pages
• Hosting of web pages

All these are new product/services which ISC would be able to offer based on the strength of the current web page that is being designed and implemented for them.

Conclusion
In conclusion the Web design for ISC relied heavily on the value addition framework

developed in the course of this paper and the design benefited greatly by doing so.

Using on-line Marketing on the Internet is hoped to help ISC in:
- Offering ISC a distinct cost advantage through less expensive product promotion, cheaper distribution channels and distinct savings. ISC being a small company will be able to leverage the Internet by using a "free" or very low-cost infrastructure to promote their services on a global basis. The web in this is a great equalizer, replacing an often-costly promotion and distribution network by a public or widely shared infrastructure.
- Will help ISC to differentiate itself not only through price but product innovation, time to market and customer service.

Most of the issues raised in-terms of Customer relations, privacy and security, implementation issues and organizational commitment are valid in ISC's case. However ISC remains insulated from most of them as ISC line of operation does not depend too much on transactions of financial nature over the web.

However important issues such as secure access of its database and organizational learning as outlined earlier are critical to the successful implementation and maintenance of the web designed for ISC.

ISC: Web Page

http://www-personaI.umich.edu/~bish/isc/

<u>Faculty Comments</u>

This report summarizes and integrates exisiting frameworks for the design of a world wide web presence of companies, integrating both marketing models and information technology development frameworks. In addition, as supplementary the student developed an actual web site for an international US based software, illustrating aspects of his integrative framework. The grade received for this 3 credit independent project is "Good".

Dr Hans-P. Borgman
Visiting Associate Professor of CIS