

**The Business Implications of
Electronic Commerce on the Internet**

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This thesis for honors recognition has been approved for
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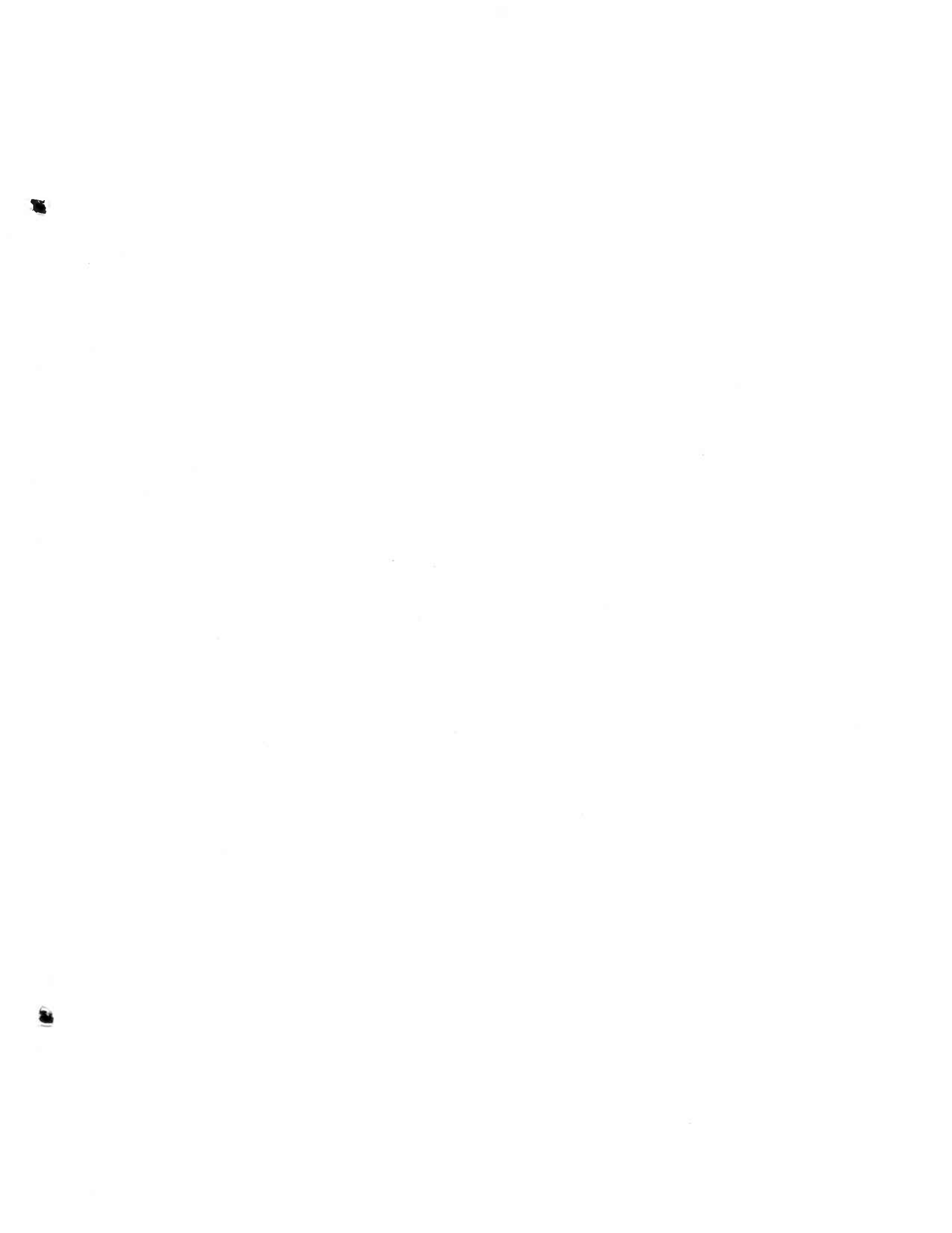
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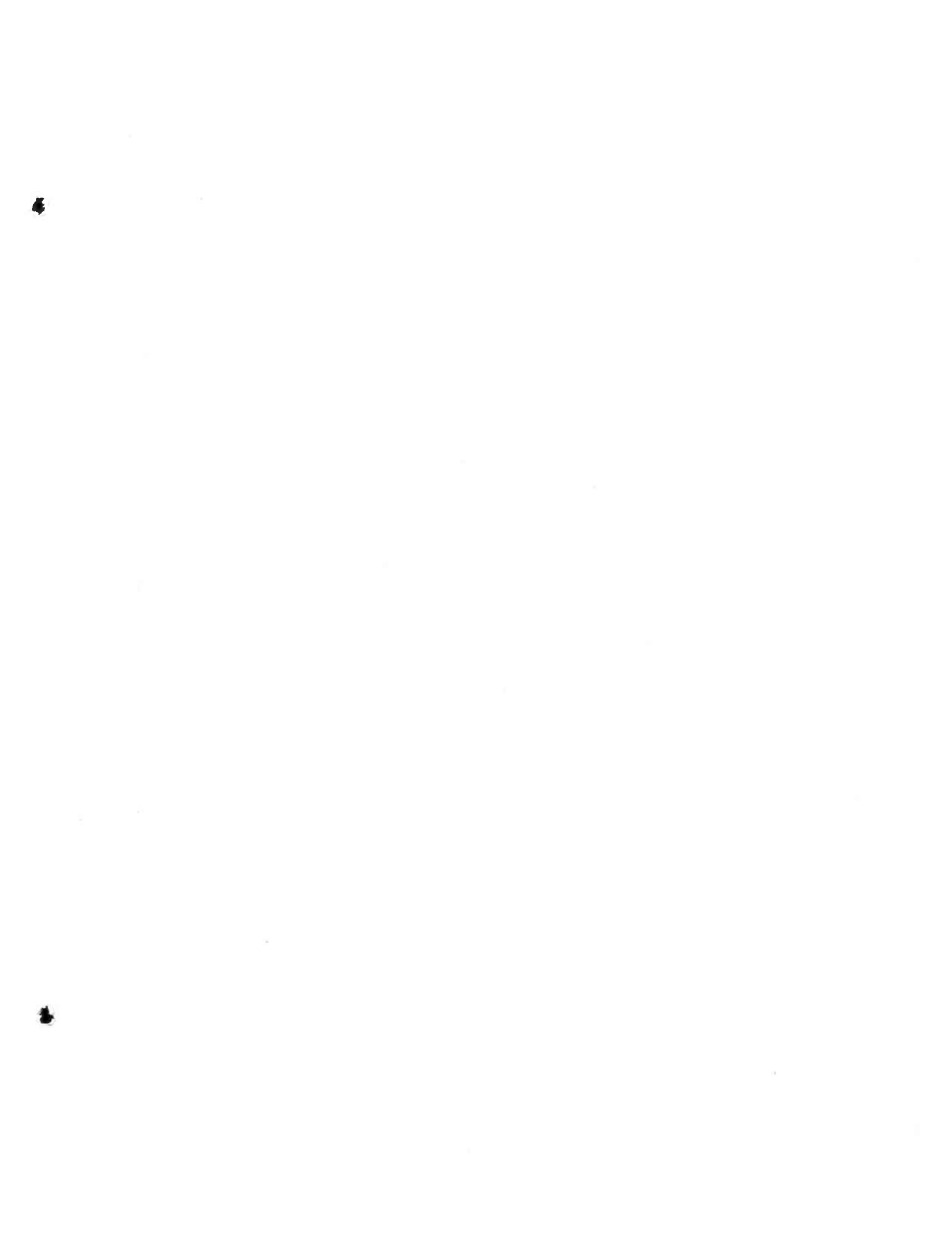
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Introduction

The integration of computer technology within any field of study or profession has become commonplace. Especially prevalent is the role of technology in today's business world. The emergence of the Internet in the past five years has fostered new growth for businesses, offered a new medium to channel customers, broadened target markets, and even started an online trend—an attempt to be the first to offer a product or service online.

More and more businesses are recognizing the need to establish themselves as an off-ramp on this information superhighway. In some instances, the need for businesses to move online stems from their necessity to stay in stride with competitors, only reacting to others' proactive movements. Still others are waiting to see if the Internet fad will pass, or are otherwise reluctant to submit to change in business practices.

Before businesses commit to the Internet as an investment, it is imperative that management understands how to effectively use this information medium to capitalize on their investment and maximize their return. In order to do so, strategic planning and research with respect to online electronic commerce is necessary. As addressed in the following sections, when dealing with the Internet and

electronic commerce, there are several implications to consider.

Establishing an Internet presence for a business does not guarantee sales or profit; rather, it serves as yet another resourceful vehicle to market and sell products. Aside from the initial costs and considerations of first establishing an online presence, external factors, whether policy or practice, may dictate the direction a business pursues. For example, many legal and financial issues have surfaced; also, user privacy and information security are important topics of concern. Each of these issues need to be addressed accordingly. By researching the current methods and standards of commercial operations on the Internet, coupled with case specific cost/benefit analysis of moving operations online, any business or entrepreneur will be able to assess the feasibility of opening up (or limiting) business operations on the Internet.

Purpose

The purpose of this paper is to explore and analyze the impact of the Internet on businesses or entrepreneurs seeking to market their goods and services online. This report will explore the history and utilities of the Internet, focus on its progression and commercialization, introduce the functionality of electronic commerce in today's business environment, and address the external industry concerns and

challenges businesses face in implementing Internet technology within a business strategy. Finally, conclusions and recommendations are presented based on research obtained from these pressing issues.

Ultimately, the objective of this report is threefold: inform businesses and entrepreneurs of the Internet's potential as a marketing medium, recognize pending regulations and concerns inherent to the Internet's development, and stress the need for strategic planning in accepting and implementing the Internet and electronic commerce in a marketing scheme.

Methodology

Extensive online research was gathered to provide current and relevant information within this report, as much of this information relies on the unfolding of current events and developments in Internet technology. Research conducted over the past year included the weekly monitoring of various technology news Web sites and periodicals. Headlines of electronic commerce news and breakthroughs in the Internet industry were the primary subject matter. Within this broad topic, various subtopics such as regulation, taxation, security, and privacy issues were sought.

Online resources including CNET's *www.news.com* and online business magazines (*Fortune*, *Forbes*, and *The Economist*), combined with the monthly print magazine *Internet World*,

provided reliable and pertinent research data for this paper. Additionally, the online version of President Clinton's *Framework for Global Electronic Commerce*, available at www.whitehouse.gov, serves as a foundation for electronic commerce policy and related issues. The document is referred to often in the following text, as much of its content lends itself to current initiatives within government and industry.

Within the dynamic technology sector, change is inevitable. Oftentimes information is outdated shortly after its release, as new information and technological improvements have already been reported. Particular to the development of the Internet, research within this report has been limited to certain aspects within market access issues, legal issues, and financial issues of electronic commerce. Within each, news and progress are announced frequently, and all information cannot be gathered without establishing a designated date for the cut-off of researched information. Therefore, December 31, 1997 serves as the cut-off date for data included in this thesis paper.

Chapter I: A Brief History of the Internet

"The Net has no independent existence. It matters because people use it as a place to communicate, conduct business, and share ideas, not as a mystical entity in itself. It's a powerful tool for integrating local economies in the global economy and for establishing their presence in the world."

—Esther Dyson, author, *Release 2.0: A Design for Living in the Digital Age*

This first chapter establishes a general background and understanding of the Internet's history and commercial progression. Within this scope, general information about the Internet's protocols and utilities are also included.

The Internet's Infancy

Responding to the Soviet Union's 1957 launch of Sputnik, the first artificial earth satellite, the U.S. Department of Defense formed the Advanced Research Projects Agency (ARPA) to better compete in science and technology. Little did one suspect that this technological response would spark the evolution of an invaluable resource known today as the Internet.

Commonly referred to as a "network of networks," the Internet grew out of a project that began in 1969 with the Department of Defense's commission of ARPANET for networking research. ARPANET was established to aid researchers in the process of sharing information—designed and developed to connect university, military, and defense contractors

(Gilster, 16). As ARPANET grew, other networks were being developed. By linking these networks together, this concept of "internetting" was employed to move information seamlessly over network lines. If one path was disabled, users would still have alternate paths available to exchange information.

Making internetwork links function properly requires an established protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system (Gilster, 16).

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. TCP ensures that messages are delivered to the correct location, while IP is responsible for network addressing. These powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET's development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if looking for a quick definition of the Internet, one can simply say that it is a network of networks that run the TCP/IP protocol suite (Gilster, 16-17).

As the Internet continues to expand, TCP/IP is not exclusive to connecting different networks. Numerous other protocols are in use, and the Internet is actually becoming a multiprotocol network integrating other standards into its operations. Developing alternatives and new protocols for varying networks are signs of the Internet's evolution and impact in today's society.

In the late 1980s, the National Science Foundation (NSF) used ARPA's success to expand their NSFNET. Growing out of networking needs to connect supercomputers around the country, the NSF expanded its efforts into a backbone network. It also helped fund regional networks to connect universities to NSFNET and give researchers access to supercomputers. After connecting international and commercial networks to each other in only a few years' time, NSFNET was superseded as the backbone of the operation, becoming but a link in the vast network of networks (Gilster, 17). The Internet is now a public communications system; not owned by any entity, it is universally accessible and unregulated.

Internet Utilities

Businesses have several options to integrate the Internet within a business. Common Internet utilities, the applications or tools that facilitate information exchange, include E-mail, FTP, Telnet, USENET, Gopher, and the World Wide Web (WWW).

- E-mail* E-mail, which stands for electronic mail, is the most popular tool used on the Internet. E-mail enables communication by electronically "mailing" documents or messages, delivered within minutes after being sent.
- FTP* FTP, or File Transfer Protocol, is part of the TCP/IP protocols. FTP allows users to login to remote computers, explore their directories, and copy files.
- Telnet* Similar to FTP, Telnet is another part of the TCP/IP protocols. It allows users access to remote computers and use of databases, search tools, and files. Telnet is commonly used to provide the same Internet service as if dialing into another computer via modem.
- USENET* USENET stands for "user's network," serving as a network of Internet users. This tool allows users to engage in discussion groups or online forums on virtually any given topic. Users post articles through e-mail, and groups of these articles make up *newsgroups*. Newsgroups are free to "subscribe" to (by including your e-mail on a list of users), and such discussions are rarely monitored.
- Gopher* Gopher is a utility designed and supported by the University of Minnesota, named after its mascot, the gopher. Gopher is a menu-based navigational tool used to literally "go for" information, accessing various Internet resources: text files, Telnet sites, WAIS (Wide Area Information Server) databases, and a wide range of other data.
- WWW* The World Wide Web, often abbreviated as "WWW" or referred to as the "Web," is a body of documents (consisting of Web "pages" or "sites") connected through hypertext links—links of data between sites, allowing users to move through information nonsequentially using HyperText Markup Language (HTML). The WWW introduced graphical and interactive content in addition to the above utilities' text-based interface, providing the most dynamic information of Internet utilities since its advent in 1991.

As a dynamic medium, the World Wide Web, and thus the Internet as a whole, has become a new haven for businesses and commerce.

Until 1991, the National Science Foundation expressly prohibited commercial traffic on the Internet. Once the prohibition was lifted, however, the network quickly entered

the mainstream, and businesses were able to exploit the new medium to market their wares.

Categorizing the World Wide Web

The World Wide Web operates with the help of a designated Domain Name System (DNS) for the various categories of Web sites. Each category can be identified in the URL (Uniform Resource Locator), synonymous to a site's "address." The anatomy of any URL varies depending on the resource and geographical location. In general, however, URLs have three or four parts: the first part of the address is the protocol, or what kind of resource it is (*http*, *gopher*, *ftp*, *mailto*, and *news*—the most popular protocol is *http*, or *HyperText Transfer Protocol*, associated with Web pages on the World Wide Web); the second part identifies where the resource is located (a computer "server" with a host name, subdomain name, and top-level-domain name); and the third and fourth parts give the path (directory and subdirectory) and name of the file to be accessed (Pitter, 3). Therefore, URLs have the general format:

protocol://hostname.subdomain.top-level-domain/directory/filename

Example: *http://www.carroll.edu/camplife/clubs/ceo/ceo.html*

And e-mail addresses are designed in a similar manner:

user@hostname.subdomain.top-level-domain

Example: *cmay@ascc.carroll.edu*

The seven top-level-domain names currently in use are characterized by their extensions after the server name within the URL:

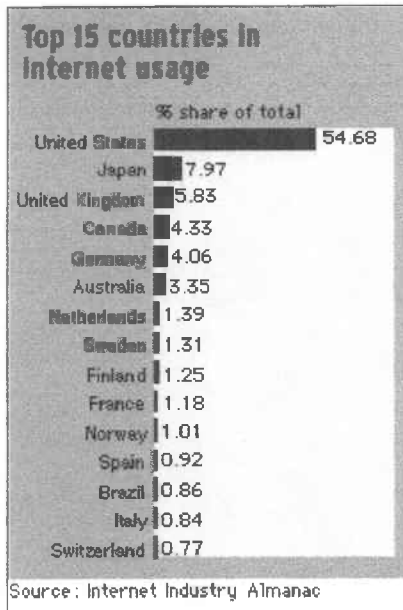
- .com = commercial organizations
- .edu = educational and research institutions
- .gov = government agencies
- .int = international organizations
- .mil = military agencies
- .net = network support centers
- .org = other organizations

Examples: `www.carroll.edu` `www.mt.gov` `www.microsoft.com`

In the rest of the world, top-level domains are usually country codes, such as `.fr` for France. For example, in the URL `http://www.louvre.fr`, which is the WWW server at the famous Louvre museum in Paris, the top-level domain `fr` indicates that the server is located in France, the subdomain `louvre` represents that the server is on the Louvre's network, and the host name `www` identifies this computer as the Louvre's World Wide Web server (Pitter, 14). Other country extensions are shown in the following list:

AQ	Antarctica	FR	France	NO	Norway
AR	Argentina	GR	Greece	NZ	New Zealand
AT	Austria	HK	Hong Kong	PR	Puerto Rico
AU	Australia	HU	Hungary	PT	Portugal
BE	Belgium	IE	Ireland	SE	Sweden
BR	Brazil	IL	Israel	SG	Singapore
CA	Canada	IN	India	TN	Tunisia
CH	Switzerland	IT	Italy	TW	Taiwan
CL	Chile	JP	Japan	UK	United Kingdom
DE	Germany	KR	Korea	US	United States
DK	Denmark	MX	Mexico	VE	Venezuela
ES	Spain	NL	Netherlands	ZA	South Africa
FI	Finland				

If a geographic location isn't specified, the URL is assumed to have emanated from the United States. Some Web and e-mail addresses are fairly short, while others can be quite



extensive. Nonetheless, these addresses are individually unique and allow users to direct or retrieve information at each specific location. As seen at left in the chart, "Top 15 countries in Internet usage," the United States holds nearly 55 percent of the total share of Internet usage worldwide. Other countries and their respective shares are also shown.

The Commercialization of the Internet on the Web

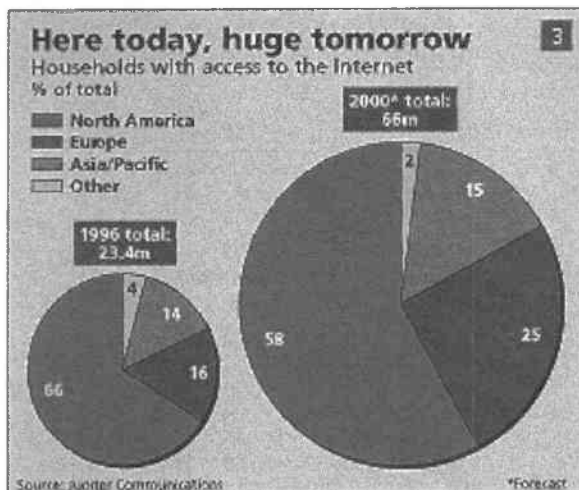
With the influx of commercial activity on the World Wide Web, new domain name categories are presently being discussed. On February 4, 1997, the Internet International Ad Hoc Committee (IAHC) announced the proposal of seven new top-level domain names (Hofstetter, 13):

- .arts = entities emphasizing cultural and entertainment activities
- .firm = businesses or firms
- .info = entities providing information services
- .nom = those wishing individual or personal nomenclature
- .rec = entities emphasizing recreation/entertainment activities
- .store = businesses offering goods to purchase
- .web = entities emphasizing activities related to the WWW

These proposed top-level domain names continue to be debated, as an official resolution has yet to be reached.

Internet Growth Statistics

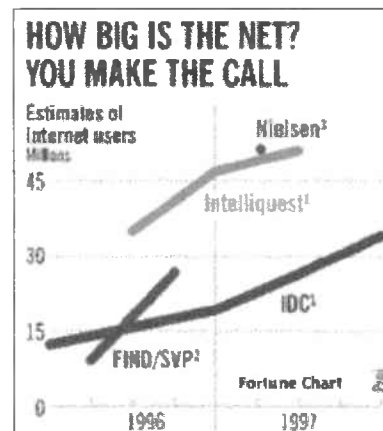
Worldwide, some 23 million households are now connected to the Internet (see "Here today, huge tomorrow" graph at



left), which translates to around 55 million users, according to a September 1997 article in *The Economist*. Some estimates, taking a broad definition of Internet use, say that by the year 2000 the number could grow to 550

million, or 10% of the world's population. In yet another analysis attempting to quantify the number of Internet users (see "How Big is the Net? You Make the Call" graph atop the next page), estimates range anywhere from 19.5 million to 45 million users.

As the debates to classify the millions of commercial Web sites and analysts' attempts to estimate the growth of the Internet continue, these are only further indications of the World Wide Web's progress and exposure for business and its commerce potential.

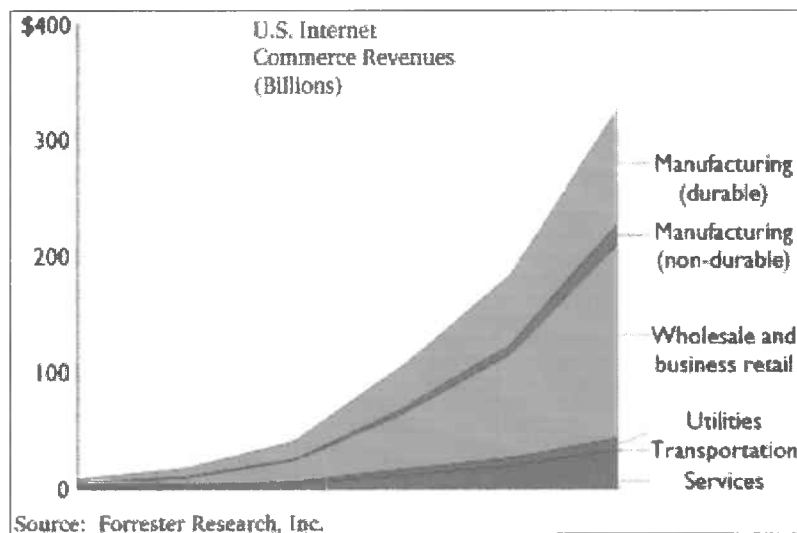


Chapter II: Electronic Commerce Explained

The term "electronic commerce" is generally associated with the buying and selling of information, products, and services via computer networks. Electronic commerce (also referred to as e-commerce) differs from traditional commerce transactions in the way information is transferred and processed. In the traditional way, commerce is conducted directly between two parties using phone, mail, and fax. With e-commerce, the information is transferred electronically from computer to computer in an automated way (Harari and Tzafrir, online).

With the myriad of activities companies engage in over the Internet, however, e-commerce may not have any clear definition per se. On the macro scale, e-commerce could encompass any activity that generates a sale, directly or indirectly, or ultimately reduces the bottom line for a company. Using computers in general to communicate internally within the organization or externally with other companies and consumers may be one company's sense of e-commerce. Considering electronic commerce on the micro scale, a more specific approach would include the profit maximized or loss minimized directly from the company's web site—Web commerce. In analyses of electronic commerce trends and statistics, Internet commerce experts monitor how much consumers spend shopping on the Net (referring to the WWW) and businesses

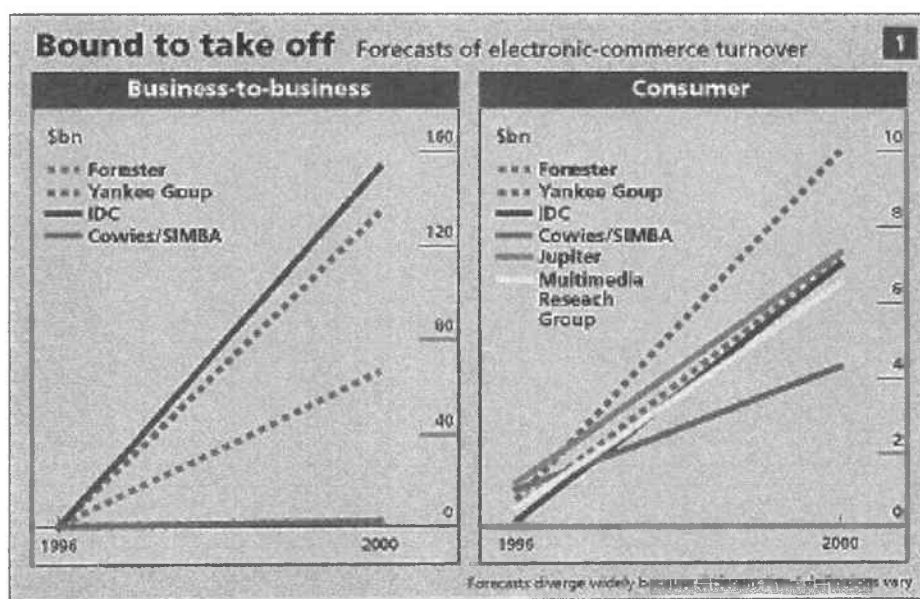
selling to each other. Similar to quantifying the Internet's growth, estimating online revenues also vary widely, often because of difficulties of definition. Estimates of several segments operating through e-commerce are charted in the graphic below.



For the purposes of this research, the scope of electronic commerce has been limited to the activity (not transactions exclusively) made as a result of offering products and services on the World Wide Web. This setting is maintained throughout the remainder of the paper, addressing the different models of e-commerce and the many business implications any company must consider when venturing into this expanding information (and very commercial) medium.

Internet Business Models

All of the various utilities and protocols of the Internet are being used successfully by businesses for selling their products and services. There are, in general, two kinds of selling models on the Internet: business-to-business (wholesale) and business-to-customer (direct retail). These models are characterized by information flow. Electronic wholesale trading has information flowing between two companies' computers, whereas electronic retail trade focuses on the communication between the customer and the computer (Harari and Tzafrir, online). In conjunction with the Internet, both methods offer companies, both large and small, opportunities and profit potential. To compare the two models, based on the graph illustrated below ("Bound to take off"), the big money is not in consumer shopping but business-to-business commerce.



These findings come as no surprise, for it mirrors the physical world, where business transactions are worth about ten times as much as consumer sales (Anderson, online).

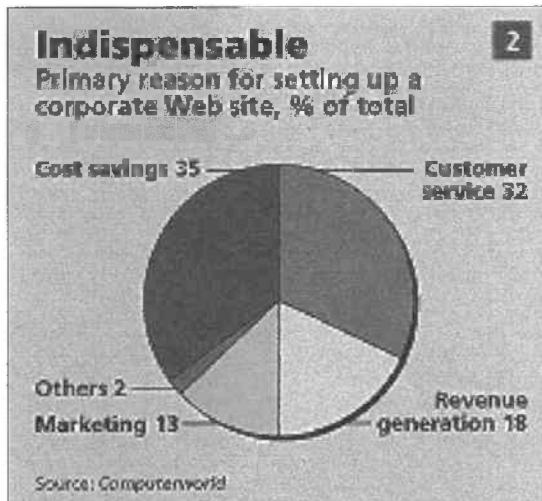
Regardless of the business model used, the practical benefits of an Internet presence—universal access, efficient communication, instant information exchange, and effortless collaboration—are now available to organizations of almost any size (Maloff, 68-69). As the Internet has allowed any business to compete online, strategic planning plays an integral role if success is to be attained.

Strategic Planning for Online Business

An imperative factor for any potential business Web presence is a clear concept of online objectives—what is to be achieved online: Is the motive to move online to generate additional revenue? Market wares to new (or bigger) audiences? Communicate better with personnel, clients, or partners? Reduce the expenses associated with fax, courier services, postal mailings, or paper document publishing? Improve the quality and accessibility of customer support services?

By the end of 1996, 80% of America's Fortune 500 firms had a Web site, compared with only 34% a year earlier; but only 5% were conducting transactions on the Web, according to Forrester Research, a Massachusetts consultancy. Instead,

their main reasons for setting up Web sites were to advertise their wares and help their customers, saving themselves money in the process (see "Indispensable" below) (Anderson, online).



Regardless of motive to move online, businesspeople must first have direction and specific objectives to accomplish online. Secondly, they must be cognizant of the outside factors influencing the development of the Internet industry. Therefore,

an analysis of the external environment of electronic commerce will provide a company or entrepreneur a general overview of the ever-growing industry. Such factors as security, privacy, taxation, and regulation are major concerns that will be addressed in the following chapters. Recognizing these external factors will provide a more practical and tailored direction a company may pursue when it considers establishing an online presence.

Chapter III: Internet Regulation

As mentioned earlier, the Internet itself is a public communications system, not owned by any entity, and it is universally accessible and virtually unregulated. Although unregulated today, increased concern for security and privacy in electronic commerce transactions has prompted guidance of the Internet in a less vulnerable position. The only formal proposal to surface thus far and offer guidelines for the direction of the Internet is the United States government.

The Framework for Global Electronic Commerce

The U.S. government has prepared a strategy to help accelerate the growth of global commerce across the Internet. In July 1997, the Clinton Administration released *The Framework for Global Electronic Commerce* to make progress in creating a stable environment for business on the Internet.

Framework establishes a set of principles to guide policy development, outlines the Administration's positions on a number of key issues related to electronic commerce, and provides a road map for international negotiations, where appropriate. It also identifies which government agencies will take the lead in implementing this work ("About the Framework", online).

The Clinton Administration developed this framework because it is a critical element of the Administration's

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agenda on trade and technology, as it discusses the commercial implications of the Global Information Infrastructure (GII). With responsible private sector leadership and support from colleagues in Congress, as well as state and local governments, the Clinton Administration hopes to work with the United States' international trading partners and ensure the development of a free and open global electronic marketplace ("About the Framework," online).

The strategy outlines recommendations that rely largely on the private sector, not the government, to take the lead in creating stability for Internet commerce. Clinton's *Framework* was designed to make buying and selling easier and more popular online. As a result, it warns governments against regulation and taxation of the Internet (Clark and Wylie, online). An excerpt from the "President's Message" in *Framework* offers

Government officials should respect the unique nature of the medium and recognize that widespread competition and increased consumer choice should be the defining features of the new digital marketplace. They should adopt a market-oriented approach to electronic commerce that facilitates the emergence of a global, transparent, and predictable legal environment to support business and commerce.

This wide-ranging document lays the foundation for a set of consistent rules in nine areas, including encryption, taxation, censorship, and protection of children's personal data. With the United States leading the way, this first attempt to create policy for the global Internet as a whole

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will require international cooperation that may be difficult to achieve.

Expecting these international difficulties, the President asked Treasury Secretary Robert Rubin, Commerce Secretary William Daley, and Ira Magaziner, electronic commerce policy advisor for the White House, to push *Framework* in a series of diplomatic meetings abroad.

Both the United States and the European Union have dealt with individual policy issues, such as encryption, regulation, and electronic payments, with little recognition of how each issue affects others on the borderless Internet. Even different branches of the U.S. government have held widely varying policies and views toward the Internet.

On the domestic front, President Clinton also ordered all federal agencies and departments to make sure that their policies reflect *Framework's* market-oriented principles. Clinton has directed three Cabinet officials to implement elements of the e-commerce framework by July 1998. Treasury Secretary Robert Rubin, Commerce Secretary William Daley, and U.S. Trade Representative Charlene Barshefsky have been urged to ward off new taxes on electronic commerce, turn the Internet into a free-trade zone, establish consumer and copyright protection, and lay the groundwork for a predictable legal environment for electronic commerce (Clark and Wylie, online).

Framework covers nine areas where international agreements are needed to preserve the Internet as a non-regulatory medium, one in which competition and consumer choice will shape the marketplace. Although there are significant areas of overlap, these items can be divided into three main subgroups: market access issues, legal issues, and financial issues. The specific topics of the guidelines are listed below (Clark and Wylie, online).

Market Access Issues

- telecommunications infrastructure and information technology
- content
- technical standards

Legal Issues

- Uniform Commercial Code/online contracts
- intellectual property protection
- privacy
- security

Financial Issues

- customs and taxation
- electronic payments

Each of these topics has their own merits and obstacles.

Those especially pertinent to e-commerce on the World Wide Web include technical standards, UCC recognition, security, privacy, and taxation.

The following three chapters discuss these issues and the federal government's stance within *Framework*. In addition, research within each sector addressing the immediate concerns of businesses and consumers shall provide businesses and entrepreneurs insight to the pressing issues related to electronic commerce on the Internet.

Chapter IV: Market Access Issues

According to *Framework*, global electronic commerce "depends upon a modern, seamless, global telecommunications network and upon the computers and information appliances that connect to it." Therefore, emphasis will be placed on the market access issues, legal issues, and financial issues as related to online commerce on the Internet.

Telecommunications and Technical Standards

Information pertinent to Web-based electronic commerce within the telecommunications sector includes the continued development and regulation of technical standards for the Internet. Standards are critical to the long-term commercial success of the Internet, as they can allow products and services from different vendors to work together. They also encourage competition and reduce uncertainty in the global marketplace.

The United States government is looking to the marketplace and industry to determine Internet standards. Recognizing technology is moving rapidly, the U.S. government's stance is that any attempts to establish technical standards and regulate the Internet (by itself or by any other national government) would only risk inhibiting technological innovation. Therefore, the United States considers it "unwise and unnecessary for governments to

mandate standards for electronic commerce. Rather, we urge industry-driven multilateral fora to consider technical standards in this area" ("Read the Framework," online).

The U.S. government invites industry to consider general standards for electronic payments, security and security services infrastructure, electronic copyright management systems, video and data-conferencing, and high-speed network technologies. These and other standards are to provide reliability, interoperability, ease of use, and scalability in the growth of global electronic commerce over the Internet.

At the same time, however, both government and technology industry leaders must exercise caution when formulating standards to regulate and further e-commerce. Premature standardization can "lock in" outdated technology; standards also can be employed as de facto non-tariff trade barriers, to "lock out" non-indigenous businesses from a particular national market.

One standard cannot be expected to resolve each of these concerns brought forth by government. If the marketplace is to initiate progress or development of the Internet's technical standards, several options may evolve. This openness allows business and developers in the industry freedom to continue creation and improvement of new technologies; it is a pro-business option that can benefit businesses, consumers, and the entire Internet industry.

Chapter V: Legal Issues

"People don't worry enough about security internally because they don't perceive a threat, yet they don't expose themselves to the security risks of the Internet because Net risks are perceived as a problem without a solution."

—Esther Dyson, author, *Release 2.0: A Design for Living in the Digital Age*

Examining the legal aspects of electronic commerce stirs up several issues Web-based businesses must consider. Electronic commerce's effects on the Uniform Commercial Code, privacy, and security demand immediate attention and resolution.

With the advancement of commerce now possible by means of the Internet and the World Wide Web in particular, additional questions arise as to the formation, completion, and overall legality of online and paperless transactions. When is a contract formed and considered binding? What is the evidence that will be needed to support the electronic commercial transaction? How will the purchaser pay for the transaction in order to satisfy the vendor's requirement for payment? As for businesses and consumers both, are they assured of privacy and security? These questions pose significant problems to the future development and seamless operation of commerce over the Internet.

A Uniform Commercial Code in Cyberspace

In the United States, every state government (with an exception in parts of Louisiana) has adopted the Uniform Commercial Code (UCC), a codification of substantial portions of commercial law. The UCC facilitates commerce among the states by providing a uniform, yet flexible, set of rules governing commercial transactions. The UCC assures businesspersons that their contracts, if validly entered into, will be enforced (Clarkson, et al., 8). Thus, the UCC attempts to provide a consistent and integrated framework of rules to deal with all the phases ordinarily arising in a commercial sales transaction from start to finish (Clarkson, et al., 365).

While the UCC wields tremendous influence on commerce in the United States, it promises to have an equally strong effect on electronic commerce. As more and more companies peddle their goods over the Internet, the UCC has become outdated in that it does not address Internet transactions.

To compensate for the shortcoming, the National Conference of Commissioners on Uniform State Law, which oversees the UCC, has proposed a new article—dubbed Article 2B—to address the commercial practices of today's information-based economy. The most important part of this effort is the development of a new UCC Article 2B (Licenses) for transactions in software and other "information." Among its objectives, Article 2B is intended to clarify the rules

that apply to the formation of contracts using the Internet and other electronic media, areas in which the contract principles of Article 2 (Sales), adopted for a manufacturing-based economy, are no longer adequate (Verdon, online).

Once Article 2B is drafted, it will be submitted to state legislatures nationwide, where lawmakers must either accept or reject the proposed document. The draft of new UCC laws is expected to be approved by the summer of 1998 (Goodin, online).

In an attempt to adopt the UCC to cyberspace, the Clinton Administration, within *Framework*, has recommended the following principles, to the extent possible, guide the drafting of rules governing global electronic commerce:

- parties should be free to order the contractual relationship between themselves as they see fit;
- rules should be technology-neutral (i.e., the rules should neither require nor assume a particular technology) and forward looking (i.e., the rules should not hinder the use or development of technologies in the future);
- existing rules should be modified and new rules should be adopted only as necessary or substantially desirable to support the use of electronic technologies; and
- the process should involve the high-tech commercial sector well as businesses that have not yet moved online.

Currently, the Clinton Administration supports the prompt consideration of the proposals by the NCCUSL and the cooperative efforts of the American Law Institute, private sector organizations, including the American Bar Association,

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and other interest groups in adoption of uniform legislation by all states. Additionally, the United States government supports the adoption of the described principles by all nations as a start to defining an international set of uniform commercial principles for electronic commerce ("Read the Framework," online).

Internationally, the United Nations Commission on International Trade Law (UNCITRAL) has completed work on a model law that supports the commercial use of international contracts in electronic commerce. This model establishes law that supports rules and norms which validate and recognize contracts formed through electronic means, sets default rules for contract formation and governance of electronic contract performance, defines the characteristics of a valid electronic writing and an original document, provides for the acceptability of electronic signatures for legal and commercial purposes, and supports the admission of computer evidence in courts and arbitration proceedings ("Read the Framework," online).

President Clinton further challenges UNCITRAL, UNIDROIT, the International Chamber of Commerce (ICC), and others to develop additional model provisions and uniform fundamental principles designed to eliminate administrative and regulatory barriers and to facilitate electronic commerce by:

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- encouraging governmental recognition, acceptance, and facilitation of electronic communications (i.e., contracts, notarized documents, etc.);
- encouraging consistent international rules to support the acceptance of electronic signatures and other authentication procedures; and
- promoting the development of adequate, efficient, and effective alternate dispute resolution mechanisms for global commercial transactions.

Meanwhile, the Departments of Commerce and State continue to organize U.S. participation in these areas with a goal of achieving substantive international agreement on model law by the summer of 1999.

Privacy Protection

Assuring personal privacy in the networked environment of the Internet will be essential to further promote online business. As consumers associate privacy with freedom, if consumers are to feel comfortable purchasing goods from businesses online, privacy of identity and transactions will need consideration.

Privacy issues to be addressed include: (1) knowledge about why information is being collected, (2) what the information will be used for, (3) what steps will be taken to protect that information, (4) the consequences of providing or withholding information, and (5) any rights of redress individuals might have.

In June of 1995, the Privacy Working Group of the United States government Information Infrastructure Task Force (IITF)

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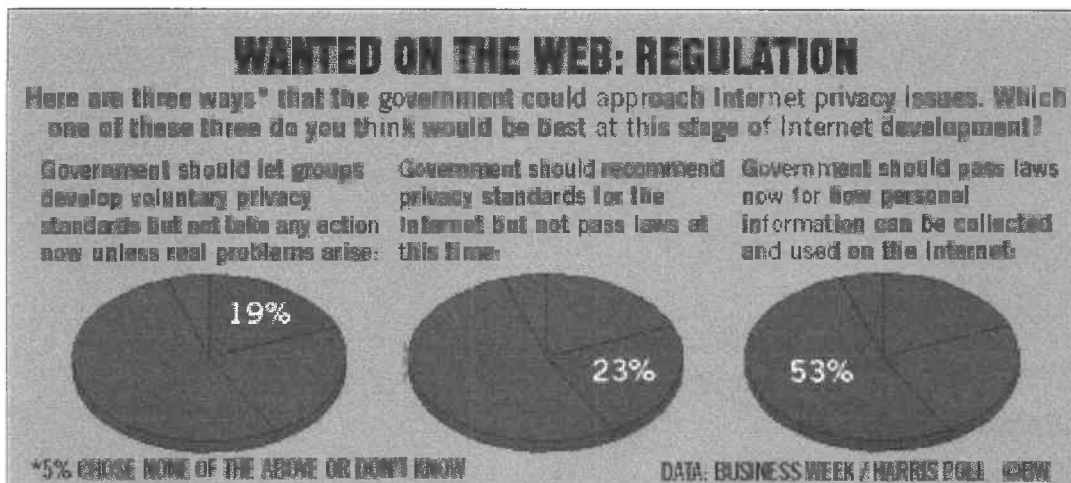
issued a report entitled, *Privacy and the National Information Infrastructure: Principles for Providing and Using Personal Information*. The report recommends a set of principles (the "Privacy Principles") to govern the collection, processing, storage, and re-use of personal data in the information age ("Read the Framework," online).

The Privacy Principles identify three values to govern the way in which personal information is acquired, disclosed, and used online: information privacy, information integrity, and information quality. First, an individual's reasonable expectation of privacy should be assured regarding access to and use of his or her personal information. Second, personal information should not be improperly altered or destroyed. And third, personal information should be accurate, timely, complete, and relevant for the purposes for which it is provided and used. Under these principles, consumers are entitled to redress if they are harmed by improper use or disclosure of personal information or if decisions are based on inaccurate, outdated, incomplete, or irrelevant personal information ("Read the Framework").

With respect to these privacy issues, the Clinton Administration is, at present, comfortable with a laissez faire, market-led approach to solve and regulate data protection. The Administration anticipates technology will offer solutions to many privacy concerns in the online environment, including the appropriate use of anonymity. If

privacy concerns are not addressed by industry through self-regulation and technology, the Administration will face increasing pressure to play a more direct role in safeguarding consumer choice in privacy online ("Read the Framework," online).

Privacy concerns are being raised in many countries around the world, and some countries have enacted laws, implemented industry self-regulation, or instituted administrative solutions designed to safeguard their citizens' privacy. Disparate policies could emerge that might disrupt transborder data flows. For example, the European Union (EU) has adopted a directive that prohibits the transfer of personal data to countries that, in its view, do not extend adequate privacy protection to EU citizens. To ensure that differing privacy policies around the world do not impede the flow of data on the Internet, the United States, according to *Framework*, will engage its key trading partners in discussions to build support for industry-developed solutions to privacy problems and for market-driven mechanisms to assure customer satisfaction about how private data is handled ("Read the Framework," online).



Online users and businesses alike should be concerned about data privacy and protection. Each can choose to be proactive in contributing to the private efforts of industry in an attempt to resolve such critically important matters. The alternative, of course, is government intervention and potential regulation, perhaps stifling the progression of technology and electronic commerce on the Internet.

Security

Of equal concern to data privacy is the secured protection of data and transmission on the Internet. When processing information and conducting business online, what measures are taken to ensure the validity and protection of any information received? Once again, information privacy, information integrity, and information quality must be controlled to serve as reliable information.

There isn't any one technology or technique that can ensure information will be secure and reliable. Accomplishing that goal requires a range of technologies (encryption, authentication, password controls, firewalls, etc.) and effective, consistent use of those technologies, all supported globally by trustworthy key and security management infrastructures ("Read the Framework," online).

Of particular importance is the development of trusted certification services that support digital signatures that will permit users to know with whom they are communicating on the Internet. Both signatures and confidentiality rely on the use of cryptographic keys. To promote the growth of a trusted electronic commerce environment, the Administration is encouraging the development of voluntary market-driven standards, public-key management infrastructure services, and key encryption products that will support authentication, integrity, and confidentiality.

Chapter VI: Financial Issues

Internet taxation matters highlight the concerns within the financial issues of electronic commerce. The current debate to tax or not to tax Internet sales transactions is yet another sign of the confidence and potential that reside in electronic commerce via the Internet. The determining factor may be how business growth might prosper or be stifled with additional regulation.

Internet Taxation

Perhaps the most intriguing area of the Internet's complexity resides in its taxation potential. Who will tax the World Wide Web? How will it be done? And when? Federal and state lawmakers, businesses, and avid Internet consumers eagerly await the answers to these posed questions.

Thus far, the U.S. federal government has taken a hands-off stance on taxing e-commerce. The Clinton Administration has published its policy guidelines in *Framework* that recommend the federal government not enact a national electronic commerce scheme (Berry, 37-38). The motivation for a tax-free Internet is to encourage the development and potential of electronic commerce—not to stifle it.

Confidence in e-commerce will promote online business, adding more opportunities and avenues for entrepreneurs and established businesses alike. Lawmakers believe that taxing

any Web-related commerce transactions in the Internet's infancy will hinder its development. Lawmakers would rather exhaust their efforts dealing with privacy, security, and similar issues to build confidence in electronic commerce than thwart the growing medium with an assortment of tax implications. The Clinton Administration supports Congress' stance on Internet taxation: "We think electronic commerce is to be encouraged, and we want to make sure that the tax system doesn't get in the way," says Treasury Department Assistant Chief for Tax Policy Glen A. Kohl. "We don't think electronic commerce justifies new taxes" (Berry, 38). The tax-free notion proposed by Clinton has been well-received by the majority of businesses and consumers, but certainly not without opposition from those who rely on tax revenues; the Administration's guidelines do not address state government taxes.

There is little doubt that states recognize the enormous potential growth in electronic commerce and the damage that would ensue if individual states act alone. State tax officials have started consensus building among themselves and are looking at existing tax laws to determine how goods and services purchased across state borders can be taxed. These studies have uncovered the potential for substantial sums; according to the Center for the Study of the States, an Albany, N.Y.-based research organization, sales taxes as a whole comprise more than 30 percent of all of a state's

general fund revenue, accounting for billions of dollars (Berry, 38).

In a November 1996 breakout session on the subject of electronic commerce taxation at the 89th Annual Conference on Taxation in Boston, participants from government and industry reached the understated consensus that there is "a problem"—not with e-commerce but with the outdated regulatory environment under which tax policy was fashioned and that is suddenly supposed to deal with the ways in which the Internet reworks retail transactions (Berry, 38).

To further understand the tax implications Internet commerce raise, exploring some basic legal principles and examples may illustrate these challenges posed in attempting to tax e-commerce.

A key concept in business law is *nexus*. In a 1992 decision titled *Quill Corp. v. North Dakota*, the U.S. Supreme Court held that the mail-order stationery and paper-products company Quill was not obligated to collect taxes from transactions to consumers buying its products in other states unless it could be proved that the company had nexus—some sort of physical presence—in the purchaser's states such as a sales force working on its behalf or property used for its business. Therefore, if states meet the threshold of nexus in any state they sold into, the purchaser's state would be

entitled to demand collection and remittance of sales taxes by the retailer at the purchaser state's tax rate (Berry, 39).

Because of the Quill decision, most states have enacted "use" tax laws, which place the burden of paying sales taxes for out-of-state purchases on the buyer when the seller is not otherwise responsible for collection. Also, in-state use taxes require that the purchaser declare the transaction and the appropriate sales tax on their income tax forms (Berry, 39).

Although the Clinton Administration has yielded to industry for the formulation of solutions regarding Internet transaction taxation, it has provided the following guidelines to consider—both on a national and international scale. From *Framework*, any taxation of Internet sales should follow these principles:

- It should neither distort nor hinder commerce. No tax system should discriminate among types of commerce, nor should it create incentives that will change the nature or location of transactions.
- The system should be simple and transparent. It should be capable of capturing the overwhelming majority of appropriate revenues, be easy to implement, and minimize burdensome record keeping and costs for all parties.
- The system should be able to accommodate tax systems used by the United States and our international partners today.

The United States government holds that no new taxes should be imposed on Internet commerce. The taxation of commerce conducted over the Internet should be consistent with

the established principles of international taxation, should avoid inconsistent national tax jurisdictions and double taxation, and should be simple to administer and easy to understand. Furthermore, such taxation will need to meet these goals in the context of the Internet's unique characteristics: the anonymity of buyer and seller, the capacity for multiple small transactions, and the difficulty of associating online activities with physically defined locations ("Read the Framework," online). President Clinton encourages state and local governments, those generally opposed to a tax-free Internet, to cooperate to develop a uniform, simple approach to the taxation of electronic commerce, based on existing principles of taxation where feasible.

Chapter VII: Conclusion

The Internet has already proven to be a resourceful, dynamic, and expanding medium for businesses and entrepreneurs looking to market their goods and services online. After exploring and analyzing the implications that exist for online business, they can better understand the concerns of government, consumers, and other businesses. This thesis explored three areas: the Internet's potential as a marketing medium, pending regulations and concerns inherent to the Internet's development, and the need for strategic planning for the implementation of Internet and electronic commerce in a marketing scheme.

As evidenced by this research, electronic commerce on the Internet is still in a state of flux. E-commerce, still in its infancy, must mature if businesses and consumers are to continue to place their confidence in it. Indeed, there is overwhelming potential for e-commerce beyond what businesses have accomplished online thus far; the Internet user population is growing, and electronic commerce sales figures continue to increase year after year.

Each of the regulatory topics discussed (market access issues, legal issues, and financial issues) remain unresolved; however, the initiative has been made by government and industry to persevere with their investment in electronic commerce and the Internet. This pooling of interests and

resources is considered imperative for the purpose of regulation and representation of vested parties. The future of electronic commerce will depend on Internet growth in addition to consumer confidence and satisfaction with the technology and methods online businesses provide.

Finally, management must be responsible in recognizing these legal and financial implications before pursuing an online strategy. The decision for any business to move online is determined case by case by identifying the costs and benefits of the project. Aside from the external business implications discussed, there are also other internal costs to consider. Initial costs for hardware and software, connections to an Internet Service Provider (ISP), and domain name registration are examples of costs incurred to establish a commercial presence online. Maintenance of online operations also must be weighed. Skilled employees and scalable operations are necessary to accommodate technological change and expansion.

These external implications, along with management's online objectives and strategic plans, determine if an effective strategy can be executed. An understanding of the protocols, regulations, and consumer concerns regarding business practices over the Internet will help businesses determine if they should limit or expand their online operations.

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