Computer Software Help Center

by

Mr. Feras Mohsen Abd_al_ameer

A Final Report of the Six-Credit Course
IC 6998 E-Commerce Practicum

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Internet and E-Commerce Technology
Assumption University

February 2004

Computer Software Help Center

by
Mr. Feras Mohsen Abd_al_ameer

A Final Report of the Six-Credit Course
IC 6998 E-Commerce Practicum

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Internet and E-Commerce Technology
Assumption University

February 2004

Project Title   Computer Software Help Center

Name   Feras Mohsen Abd_al_ameer

Project Advisor   Rear Admiral Prasart Sribhadung
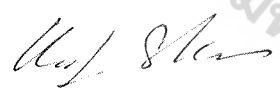
Academic Year   February 2004

The Graduate School of Assumption University has approved this final report of the six-credit course, IC 6998 E-Commerce Practicum, submitted in partial fulfillment of the requirements for the degree of Master of Science in Internet and E-Commerce Technology.

Approval Committee:

(Rear Admiral Prasart Sribhadung)	(Prof.Dr. Srisakdi Charmonman)
Advisor	Chairman
(Dr. Ketchayong Skowratananont)	(Assoc.Prof. Somchai Thayarnyong)
Member	MUA Representative

February 2004

ABSTRACT

Selling on the Internet is still a new adventure for many of the businesses. Many of the businesses are still using traditional ways of record keeping. The writer discusses that the use of Internet to sell and share information among the staff is a useful method and is cost saving too. On the other hand the company also receives benefits of populism and internationalism to the company. There are millions of people already connected to the Internet and this number is growing at an enormous rate.

The writer talks about how Programmer Software Help Center can make use of the Internet technology through making company's Website rather than opening up new businesses around the world to provide company-made products that the company has to offer to the people. Then the writer discusses various steps in the development process of a website and the estimated costs of the new proposed system and the estimated benefits to be gained from the proposed system after it is put into action.

This project assists the writer to not only get more outlooks about Learning online and selling products in this new market, but also learn to adapt the Internet advantages to support goals that the company will find tough to attain by using traditional methods. This project applies computer and some of the marketing management techniques to push the company into the new market by using Internet as the main tool. This project developed a website as a storefront and uses the computer system to provide accuracy, timeliness and provides organized information to the employees and management when required. It will furthermore decrease the cost and will increase customer satisfaction, in a way that customers can shop from anywhere, anytime and at their comfort.

i

ACKNOWLEDGEMENTS

Several people have made contributions to this project. The writer would like to acknowledge their efforts and thank them for their contributions.

He would like to thank Rear Admiral Prasart Sribhadung, his project advisor, for his valuable suggestions, help, and advice given in preparation of this project.

He extends his sincere thanks to his family members for their guidance and assistance along the way.

This acknowledgement cannot be completed if he does not mention management and staff members of Computer Software Help Center. Therefore, he would like to express his gratitude to all members of Computer Software Help Center who have given him very useful information and the essentials about the company.
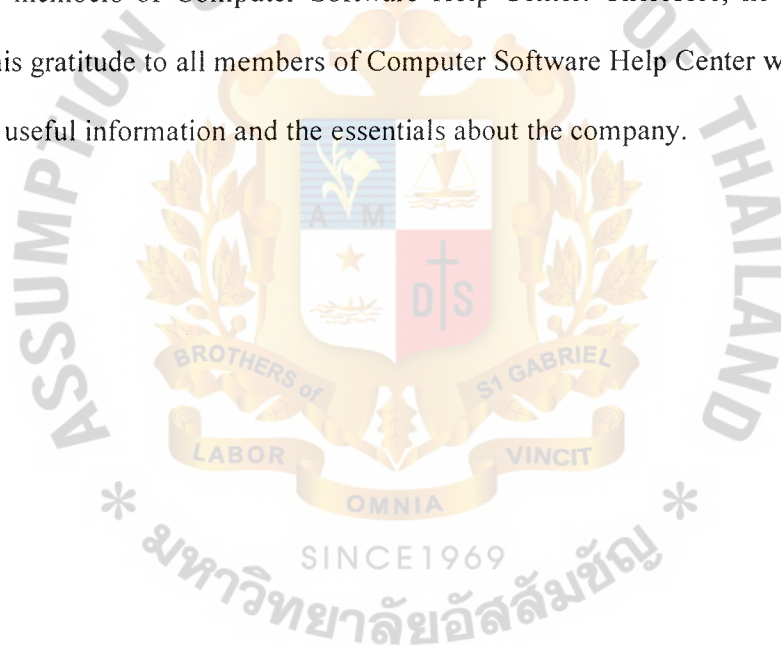
ii

TABLE OF CONTENTS

iii

LIST OF FIGURES

LIST OF TABLES

I.   INTRODUCTION

1.1   Background of the Project

Computer Software Help Center or CSHC in short, is an education center and a programmers directory that complies and disseminates programming related resources. Moreover, it is a help center that provide courses and learning material. Computer Software Help Center is geared toward programmers who are looking to enhance their knowledge and experience with dynamic development tools (scripts, books, CDs, courses, and other resources). With many of the programming resources available today, our mission is to provide programmers with the best centralized collection of quality programming information and resources in the most convenient fashion.

Computer Software Help Center is not exposed in the use of the computer technology. Opening the old fashioned way business is very pricey and requires a great deal of legal barriers to be crossed first, especially when opening business in another geographical area. On the other hand, the existing system also sometimes runs into many obscurities such as long delays in processing orders, making reports and so on.

With development of the business they also insist on using modern technology, to overcome the existing pitfalls as well. The new computerized system will use the internet medium to make the website as a storefront and will have database in which data is shared among education center staff, which will provide accuracy and timeliness and where information can be stored in controlled ways. In addition, the education center will be able to serve its customers better and faster; this will provide customers more satisfaction. We all know that customers satisfaction is the main goal of any business and provides a stronger backbone to the business when customers are satisfied with the products and services provided to them.

1

Internet technology could be very helpful in this matter as it's much easier to open up a website and some are even free of charge and can become another channel to give services to customers and attract new customers from around the world. Website will expose the products to the people around the world rather than just one place.

The education center's website not only will give exposure to the products, but can also provide added services to the visitors, such as 24 hours customer services online, order tracking online or even giving some special discounts if the customer orders the goods through the internet. With the use of internet, customers could send their enquiries about the education center and its products anytime and from services that the education center has to offer to its customers.

Internet-integration is a paradigm shift. The web provides a network whereby companies, clients, employees, and vendors share critical information with speed and insight that redefines business as we know it. By connecting people and enterprise information in the innovative ways, internet-integration expands markets, attracts and retains customers, improves productivity, and empowers employees, while improving shareholders' return on investment.

Enterprises that move swiftly and strategically to leverage the internet's power and accessibility will establish the benchmark for decades to come. The time for internet-integration is now, and the need for a well conceived strategy and implementation is absolutely critical. The objective is fundamental business change, accomplished while the technology toolset evolves, even as it is employed.

Internet is a very useful medium to convey the message and do business online at very low costs and is very easy to setup as well. It is making more and more businesses far-reaching. It is also stated by many of the researchers who did surveys or researches related to internet and E-commerce that digital product and information related business

2

are doing really well on the internet, as internet becomes their extra medium of communication with the customers and can reach more people at the same with lesser cost. From this we could guess that internet could be used by anyone and can procure benefits from it.

1.2 Objectives of the Project

Objective of this project is the development of the website to give the education center exposure around the globe, which will provide customers with another option of buying and learning online with the help of internet to provide faster and better services to the customers. Objectives of building a website are to provide the following matters to put in to action:

(1) To build education center database for different departments to share among them.

(2) To improve the speed of the retrieving information to increase the performance for customer services.

(3) To compare the cost between the existing system and the proposed system.

(4) Providing customers' security seals from the education center to gain customers confidence that doing business online is of no or very low risk and things could be done easily and reliably on the internet as well.

(5) To give customers choice to buy and learning online at their ease and comfort.

1.3 Scope of the Project

There is a big scope in building this project which will include many of the main features of the internet and the education centers. This will help us to understand the relations of the education centers for uses of internet technology more easily and clearly.

(1) Effective management of the website to make customers and other website users find the information effortlessly.

(2) Make the website use more reliable and secure to make customers buy on the internet.

(3) To produce reports and responses to queries about sales and customer information records.

(4) Conducting the strength and weakness opportunity and threat (SWOT) analysis to know how the education center is performing.

1.4 Deliverables

Mainly there are only two deliverables after the project is completed. Firstly the prototype of the website, which will be include in Appendix A to give a summary look at the website; how the website looks like, what features are available to the visitors and customers and how they can go through each of the available information. The database design will be include Appendix B to give a look how our database will be build and how dose it will serve our project needs from connecting the different departments and branches.

Finally, a report taken into account all the details mentioned earlier in the objects, like how they are achieved and what kind of strategies are used to attract more people to the website to bring more benefits to the education center through the use of the internet.

4

II. LITERATURE REVIEW

2.1 Electronic commerce

Electronic commerce is an emerging concept that describes the process of buying and selling or exchanging of products, services, and information via computer network including the internet. Electronic commerce can be defined as:

(1) From a communication perspective, Electronic Commerce is the delivery of information. Products, services, or payments over the telephone lines, computer networks, or any other electronic means.

(2) From a business process perspective, Electronic Commerce is the application of technology toward the automation of business transaction and work flow.

(3) From a service perspective, Electronic Commerce is a tool that addresses the desire of firms, consumers, and management to cut service costs which improve the quality of goods and increasing the speed of service delivery.

(4) From an online perspective, Electronic commerce provides the capability of buying and selling products and information on the internet and other online services.

The term commerce is viewed by some as transaction conducted between business partners. Therefore, the term Electronic Commerce seems to be fairly narrow to some people. Thus, many use the term e-business. It refers to a broader definition of electronic commerce, not just buying and selling but also servicing the customers and collaborating with business partners, and conducting electronic transaction within an organization. According to Lu Gerstner, IBM's CEO: "E-business is all about cycle time, speed, globalization, enhanced productivity, reaching new customers and sharing knowledge across institutions for competitive advantage."

In its broadest sense, electronic commerce refers to the use of electronic means and technologies to conduct commerce, including within-business, business-to-business, and business-to-consumer interactions. The enabling technology, of course, are also used for noncommercial activities such as entertainment, communication, filing and paying taxes, managing personal finance, research, and education, which may still include the service of online companies. As a result, it is somewhat difficult, and sometimes arbitrary, to separate electronic commerce areas from noncommercial applications of the same technologies and infrastructure.

Although these may be cutting edge applications, conventional electronic commerce areas include:

(1)   Searching for products information.

(2)   Ordering products.

(3)   Paying for goods and services.

(4)   Customer Service

All are conducted online. The use of the internet to support marketing and customer interface is only part of electronic innovations that are changing the way firms do business. With intranets, corporations distribute internal memos and announcements to their employees. And knowledge exchange and scheduling communications flow worldwide in a timely fashion. With direct connection to suppliers (for instance, an extended intranet), the same technology is used for manufacturing and supply chain management. 3M (www.mmm.com), for example, expanded its EDI service to the internet, allowing its over 2,000 suppliers and customers access to its EDI transactions via any way they choose; e.g. private VANs, phones, and faxes, as well as the internet.

To sum up, for within-business, business-to-consumer, business-to-business applications, electronic commerce includes:

6

(1) Internal electronic mail and messaging.

(2) Online publishing of corporate documents.

(3) Online searching for documents, projects, and peer knowledge.

(4) Distributing critical and timely information to employees.

(5) Managing corporate finance and personnel systems.

(6) Manufacturing logistics management.

(7) Supply chain management for inventory, distribution, and warehousing

(8) Sending order processing information and reports to suppliers and customers.

(9) Tracking orders and shipments.

From countless other business activities. The most important thing, the number of areas being affected by electronic commerce is the fact that these activities can be integrated into a holistic business process. Thus, all the areas mentioned above are not really a separate application, but rather, one aspect of the whole electronic commerce process. For example, inventory and supply management is tied to production as well as to the demand data collection from consumers ordering via web stores. In short, the business potential of electronic commerce is the capability to innovate and integrate business and market process. The most obvious and immediate use is achieving transactional efficiency.

2.2 Commercial use of the E-Commerce

Business needs to place electronic commerce within the context of broader uses of the internet than the traditional commercial framework. As a market, electronic commerce impacts not only marketing but also production and consumption information collected through web stores is used to customize products, to forecast future demand, and to formulate business strategies. Consumers not only order and pay

7

for products online only, but also search for product information, reveal their performances, negotiate with sellers, exchange information about products firms, and use products online by filtering, processing and linking them with other computer programs. Likewise, supply chain relations among businesses and competitive strategies need to aim at increasing the overall market efficiency, not just transactional efficiency.

The internet can certainly be used not only as an alternative marketing channel, selling existing products online, but the future of electronic commerce will be guided by innovative digital products and services that will emerge in the electronic marketplace. But from where are these products and processes coming? The explosive growth of the internet gives a partial answer. The core of digital products that can be digitized: all paper-based information products such as newspapers, magazines, books, journals, and databases; computer software and games; audio products including music and speeches; video and multimedia products such as movies and television programs; other information products such as weather reports, stock quotes, government information, consumer information, and even personal information; and digital counterparts for existing products such as room keys, digital currency, digital checks and other financial instruments, airlines and concert tickets, and so on.

Many business professionals dismiss the commercial potential of the internet, pointing out that the most common uses of the internet and the web are browsing and entertainment. In turn, the most promising use of the internet technology is found in intranets and other within-business and business-to-business applications, in which EDIs and corporate networking are already familiar. A survey found that only about one in ten uses the internet for shopping. However, shopping here is very narrowly defined. Internet users seeking information are in fact in search of products and thus network uses commonly categorized as informational and entertainment activities need not be

viewed separately from commercial activities. Unlike television entertainment in which commercial advantage and noncommercial entertainment are alternatively presented, commercial uses be thought of as digital products, for instance digitized information which can be sold directly as a product or used as a component of business transactions, called non-commercial activities on the internet are indeed commercial, an important realization for digital product sellers. In a truly informational age, the immense amount of human knowledge already accumulated and linked via the internet will be the product being exchanged. As Christopher Anderson of the Economist argued, "in the audacious uselessness of millions of personal fish tanks (web pages) lie the seeds of the internet revolution" (1995). These fish tanks are displayed side by side with products marketed by America's corporate giants.

2.3   Classification of the E-Commerce field by nature of transaction

A common classification of electronic commerce is by the nature of transaction. The following types are distinguished:

(1)   **Business-to-business (B2B).** Most of electronic commerce today is of this type. It includes inter organizational information system transactions described earlier and electronic market transactions between organizations.

(2)   **Business-to-consumers (B2C).** These are retailing transactions with individual shoppers. The typical shopper at Amazon.com is a consumer, or customer.

(3)   **Consumer-to-Consumer (C2C).** In this category, consumers sell directly to consumers. For example, the individuals selling in classified ads (e.g., www.classified2000.com) and selling residential property, cars, and so on. Advertising personal service on the internet and selling knowledge and expertise is another example of C2C. Several auction sites allow individuals to

put items up for auctions. Finally, many individuals are using intranets and others organizational internal networks to advertise items for sale or services.

(4) **Consumer-to-business (C2B).** This category includes individuals who sell products or services to organizations, as well as individuals who seek sellers, interact with them, and conclude a transaction.

(5) **Non-business electronic commerce.** An increasing number of non-business institutions such as academic institutions, not-for-profit organizations, religious organizations, social organization, and non government agencies are using various types of electronic commerce to reduce their expense (e.g., improve purchasing) or to improve their operations and customer service. (Note that in the previous categories one can usually replace the word business with organization.)

(6) **Intra business (organizational) electronic commerce.** In this category we include all internal organization activities, usually performed on intranets that involve exchange of goods, services, or information. Activities can range from selling corporate products to employees to online training and cost-reduction activities.

Computer software help center website can be classified as B2C because it sell products directly to end customers.

2.4 The World Wide Web

The World Wide Web (the Web) is at the heart of the explosion in the business use of the Net. The Web is a system with universally accepted standards for storing, retrieving, formatting, and displaying information using the client/server architecture. It was developed to allow collaborators in remote sites to share their ideas on all aspects of a common project. If the Web was used for two independent projects and later

relationships were found between the projects, information could flow smoothly between the projects without making major changes.

The Web combines text, hypermedia, graphics, and sound. It can handle all types of digital communication while making it easy to link resources that are half-a-world apart. The Web uses graphical interface for easy viewing. It is based on standard hypertext language called Hyper Text Markup Language (HTML), which formats documents and incorporates dynamic links to other documents and pictures stored in the same or remote computers. Using this links, the user need only a point at highlighted key word or graphic, click on it, and immediately be transported to another document, probably on another computer somewhere else in the world. Users are free to jump from one place to another following their own logic interest.

Web browser software is programmed according to HTML standards, universally accepted, so anyone using a browser can access any of the millions of Websites. Browsers use hypertext's point-and-click ability to navigate or surf-move from site to site on the web to another desired site. The browser also includes a narrow or back button to enable the user to retrace his or her steps, navigate back, site by site.

Those who offer information through the web must establish a home page a text and graphical screen display that usually welcomes the user and explains the organization that has established the page. For most organizations, the home page will lead the user to other pages, with all the pages of a company being known as a Web Site. For a corporation to establish a presence on the web, therefore, it must setup a website of one or more pages. Most web pages offer a way to contact the organization or individual. The person in charge of an organization's website is called Webmaster. To access a website the user must specific a uniform resource locator (URL), which points

11

to an address of specify resource on the web. For instance, the URL of Assumption University is http//:www.au.ac.th

Http stands for hypertext transport protocol, which is the communications standard used to transfer pages on the web. HTTP defines how messages are formatted and transmitted and what action web servers and browsers should take in response to various commands. www.au.ac.th is the domain name identifying the web server storing the web pages.

2.5   Internet and E-Commerce security

Security is a critical concern to exchange information and delivering business services via the internet. Fear for security breaches is arguably the greatest obstacle to full public and business participation in the internet based electronic commerce. The public requires full assurance that information they supply will not be misused, and that credit card information or other payment mechanisms are confidential and secure. Businesses share these concerns but also demand their systems are protected from intrusion and tampering. Robust solutions to internet security concerns are rapidly emerging, driven by major software developer, corporations and banking institutions who have strong vested interests in developing a vibrant climate for electronic commerce. Consequently the internet has never been a safer place to conduct business. The main challenges remaining in internet security are to ensure that solutions are simple and inexpensive enough to implement, and the widespread public confidence in these solutions is strong. The large credit card companies, among others, realize this, and are conducting public awareness programs to educate cardholders about internet secure payment systems and security protocols such as SET (Secure Electronic Transactions).

Security Elements

Internet security can be divided into six related parts:

Confidentiality - The transmitted information remains private, and is disclosed only to the intended recipient. Others cannot eavesdrop on exchanges or view private records. In the paper world, a sealed envelope prevents others from viewing information. In the digital world, encryption provides comparable protection both during transmission and storage.

Authenticity - The communicating parties are accurately identified. All parties must know the valid identity of the others to avoid fraud and misrepresentation. Identification and authentication components can be further classified as:

(1)   "Something you know" - such as a password or PIN (Personal Identification Number), that is provided on request to establish identity.

(2)   "Something you have" - such as an object like a key, credit card, token or passport. A driver's license or other document issued by respected authority may be accepted as proof identification. Digital certificates issued by trusted third parties serve as digital equivalents. Token or credit card reader systems also fall into this category, but because they require the user to have special hardware these devices tend to be impractical for general internet use.

(3)   "Something you are" - such as a recognizable unique physical attribute like a fingerprint, voice, signature or picture. Digitally, biometric techniques such as voice recognition or retinal scans deal with the "something you are" aspect of identification and authentication. Hardware demands for these sophisticated systems limit their applicability for the Internet use. In contrast, digital signatures also fall into this category but are practical for internet use. Note that digital signatures are not quite analogous to

13

handwritten signatures; a digital image of a signature is not secure as it can be easily copied.

Non-repudiation - The user cannot deny their electronic actions or that an exchange took place. For example, a customer cannot order a product, transmit electronic funds then deny the purchase at a later date. By convention and law, a signature and third party witness bind a person to their actions. Digital signatures serve this purpose electronically.

Integrity - The information cannot be changed. The message received must be identical to the message sent. There can be no changes made either deliberately or accidentally in transit or during storage. A sealed envelope prevents tampering with paper documents. The nature of the printed page makes it difficult to alter without detection. Digital signature technology can create virtual envelopes that can be verified by the recipient to ensure that no unapproved changes are possible with out detection. To ensure integrity of stored data against malicious changes it is necessary to guard against virus invasion and against unauthorized access to storage facilities. Encryption of stored data can provide additional protection. Data backup allow recovery in the event when the data is damaged.

Access Control - The resources are under the exclusive control of authorized parties and no others can access the systems or information. In the non-digital world, access control is provided by lock and key. In the digital world firewalls, access privileges and user identification and authentication techniques (such as password and authorization certificates) serve as equivalents.

Availability - The information or service is available for access when needed. Sending channels must deliver reliably, and information storage facilities must function when they are required. In the paper world, availability is assured through reliable mail

and courier systems. Secure storage is achieved by protecting against damage by fire, ware and other perils, by protection from theft, and by measures to ensure against accidental loss. Similar measures provide digital security, but additional steps must be taken to prevent disruption of service by power outages, or due to failure or overload of systems and communication networks. Data backup, virus protection, sufficient capacity to handle the demands posed by heavy network traffic, and redundant servers help assure availability.

Thought must be given both to the security of information in transit, and to the security of information stored on computers and networks. A secure transaction over the internet must ensure confidentiality, integrity, authenticity, and non-repudiation. Access control is vital when records of electronic commerce are stored and a company's internal computer network is connected to an internet, extranet or intranet site. Availability of systems and services is crucial as companies increase their reliance on internet, extranet and intranet channels for doing business.

Websites vary in the type and level of protection they need, depending on their function. Availability of service is important for all websites, but vital for internet services that are mission critical to a company. Web applications that mostly provide advertising can make do with provisions to ensure that the site is available, information presented is accurate and has not been accidentally or deliberately changed. Secure internet, extranet or intranet sites must also ensure that the information they contain is safe from unauthorized access. When such sites are used not just for presenting information but also for conducting transactions, non-repudiation of transactions become increasingly important and protection of data integrity in transit and during storage must be considered more closely. Sites providing electronic commerce require strong solutions in all aspects of security.

Important techniques for Internet Security

Encryption

Encryption involves scrambling a message using a code, so that someone can only unscramble the message with a specific key. This ensures message privacy from view by all but the intended recipient. In traditional cryptography, the same key was used to both encrypt and decrypt a communication. This is also known as private key encryption and has proven to be well-adapted to internet use, because it avoids the difficult of transmitting the symmetrical key securely. The public key can be published and distributed widely with no need to expose the private key to discovery.

Public Key Encryption

Public key system can be used for encryption and decryption, as well as for digital signature generation and file integrity verification. Public key asymmetrical cryptography operates with the use of two encryption keys. One key is made public, and the other is held in secret. Data encrypted with one key is only decrypted using the other key. The standard procedure for this type of encryption is:

(1)   The intended recipient generates a public and private key.

(2)   The intended recipient transmits their public key to the senders.

(3)   The sender encrypts and transmits a document to the intended recipient.

(4)   The intended recipient decrypts the document with their matching private key.

This method is secure because only the matching private key can decrypt the document and only the recipient has the matching private key. For practical purposes, anyone who may deliberately or accidentally intercept the encrypted document will be unable to crack the code. The hardware and time required to crack a 512 bit encrypted code is so great that is unfeasible.

Public key encryption can also be used for digital signatures to ensure authenticity. This involves two sets of public and private keys. The sender uses their private key to sign a document and encrypt the message with the recipient's public key. The recipient uses their private key to decrypt the document then the public key of the sender to verify the signature. If the document decodes properly when the public key is applied, then it is authentic.

One other step is important - the person who uses a public key must have assurance that the private key is in fact held by the person with whom they wish to communicate. The public/private key pair should be registered with a Certificate Authority, who like a notary public in the paper world bears the responsibility for verifying that certain public key belongs to a specific individual, and issues a digital certificate to that effect. This verification can be done at various levels, ranging from little more than a simple confirmation that the person concerned has claimed the key, up to higher levels where individuals must present themselves in person with personal documents to prove their identity along with their public key.

The public key can be publicly distributed at will, often posting it to websites, placing it in a central network directory or e-mailing it to potential users. The private key is held in confidence and protected from discovery by its owner.

Web users wishing to use public key encryption can obtain key pairs for general use and register them by visiting the website of a certificate authority, such as VeriSign and follow their online procedures. Generally, no charges are required for personal use but there is some fee required for the administration of the certificates for commercial purposes. Users may require several certificates, for example, one issued in association with a credit card for SET-based purchases on the internet, one for a web browser, one for signing and securing e-mail, and another for logging in to a company network.

Digital wallets, browser plug-ins for managing digital certificates and key pairs, will assist in managing a user's certificates.

Companies wishing to use public key encryption system may purchase key generation software and certificate management servers, or outsource these functions to a vendor. Netscape, Microsoft, Entrust and others provide systems for developing in-house solutions. VeriSign, GTE Crop, BBN Planet Corp and others provide services for those wishing to outsource. Outsourcing may be the fastest to set up and the most cost effective solution for smaller organizations. Purchasing a server may be most appealing for large intranet applications because it avoids per-certificate charges and may provide more flexibility in managing directory-based for employees.

Digital Signature

A digital signature is the functional equivalent of a handwritten signature. Is provides a means by which information cannot be repudiated by binding the communication to the person who signed it. In addition, any changes to the information after the digital signature is affixed can be detected, thereby establishing the reliability and integrity of the information contained in the digitally signed file. Digital signatures rely on public key systems, where anyone can access the public key associated with the private key that was used in signing the document. If the public key matchers the message, then the authenticity of the sender is verified, and the recipient can be confident that the message was not tampered with in transit.

Digital signatures are created by using public key cryptography and message digest. A message digest is a value generated for a message (or document) that is unique to that message. A message digest is generated by passing the message through a one-way cryptographic function; that is, one that cannot be reversed. When the digest of a message is encrypted using the sender's private key and is appended to the original

message, the result is known as the digital signature of the message. The recipient of the digital signature can be sure that the message really came from the sender. Changing even one character in the message changes the message digest in an unpredictable way, the recipient can be sure that the message was not changed after the message digest was generated.

Digital Certificates

Digital signatures are poised to become a major tool in internet security. A certificate identifies its owner to someone who needs proof of the bearer's identity; thus digital certificates are useful in a wide variety of situations. They can be used to sign an e-mail document to positively identify and authenticate the sender. Certificates are exchanged between web browser and web server using the Secure Sockets Layer (SSL) protocol to identify both the user of the web browser and the provider of the information and services on the web server. Certificates can be used to replace passwords and log-in ID's anywhere that access is to be restricted to certain users, such as registered customers. In many applications, certificates may replace "cookies" which have proven unpopular with many web users. Companies can issue digital certificates to their employees, and use the certificates as the basis to allow access to network resources, again replacing passwords and log in names. Employees accessing company networks from home or when traveling can use digital certificates to identify themselves to the corporate firewall.

A certification authority provides the digital certificate. The authority is responsible for establishing that given public key does indeed belong to a given individual. The level of confidence that can be placed in a certificate depends on the rigor of the process used to verify identity when the certificate is issued. For example, VeriSign offers four classes of digital Ids. The identification requirements are greater

for higher numbered classes. A Class 1 digital ID offers minimal assurance of the owner's identity. A Class 4 digital ID offers assurance of not only the individual's identity, but also of that person's relationship to a specified company or organization.

Although versatile, the certificates rely on infrastructures of services to issue and revoke them, store them and verify their status and ownership. Digital certificates are not yet fully standardized and interoperable. Many different issuing bodies exist, and a certificate issued for one popular browser may not work with another one, each application has its own way of handling the certificates, and not all certificates can be exchanged between all applications. This leads to the nuisance and complexity of obtaining and managing numerous digital certificates. The process of getting and using certificates is still difficult and confusing for people, although major players such as VeriSign and the browser vendors understand this and attempting to make the process easier, as well as conducting publicity campaigns to increase consumer awareness and confidence.

2.6 Background of the Organization

The current system which we must mention is totally done by manual processes. Sales Department issues the new merchandise certificate, prepares invoice and collect customer information when any sale occurs. Salesperson must remove or remark such item in catalog inventory that the item has been sold, so that another could be orders to be processed.

The customers' information is also recorded in each specific order. When the order have been placed, then the salesperson will write out an order form and send it to management to enter order information and process the order then the certificate will be issued to the customer.

20

Computer Software Help Center cheerfully provides after sales service or to all its loyal customers for merchandises order from the organization such as providing new technology, answers the customer questions and proving customer skill, providing tips and tricks that belong to customer interest. The Customer Service Department retrieves the knowledge of the customer for proving customer skill, which takes a long time because everything is done manually and all the records are kept in the manual ledger books. After that, service department request is issued and then desired action is taken. This service is also provided to other customers who did not join our company but they pay a little amount as service charges.

Computer Software Help Center has formed from a semi-integrated to a fully integrated manufacturer and retailer with now talented in-house designers and programmers. It used to give out orders to contracted manufacturers to perform the order completion tasks, which cost a bit higher as the job was given according to the orders taken in and no permanent salary was given to them.

The company is using the old implemented traditional ways to handle its inventory and sell its product to customers. This company is having physical center for selling its products and services, and is not yet exposed to the Internet technology and how useful it is to their business. The center opens everyday and sales people try to sell its products to the people who visit its center and are looking for information.

It's just common logic that not everyone who comes to the center will buy or apply for sure. Some people just come to visit and make up decisions for the future, some might think it's out of their range or some won't like the products or services and don't want to give custom service because then it will take time to prepare the things. Another thing is that these things are not that cheap and also everyone can't afford

therefore it normally takes a bit longer in time for people to decide whether they want to buy such things or just want to wait a little bit longer.

Now if they want to increase the sales situation and want to make more customers, then it is first necessary that more and more people visit the center. This could be possible some days such as if it's a holiday or so, but on normal days it will still come back to normal routine. If company decides to open another store at a different location where it thinks more people will visit, then it has to bear in mind the cost and risks it has to go through. Opening a new business somewhere else is not that difficult if we have enough money but to make that business run successfully is always the key question.

It took over three years to start earning any profit from the offshore branch in another area, because cost of opening any business is very high
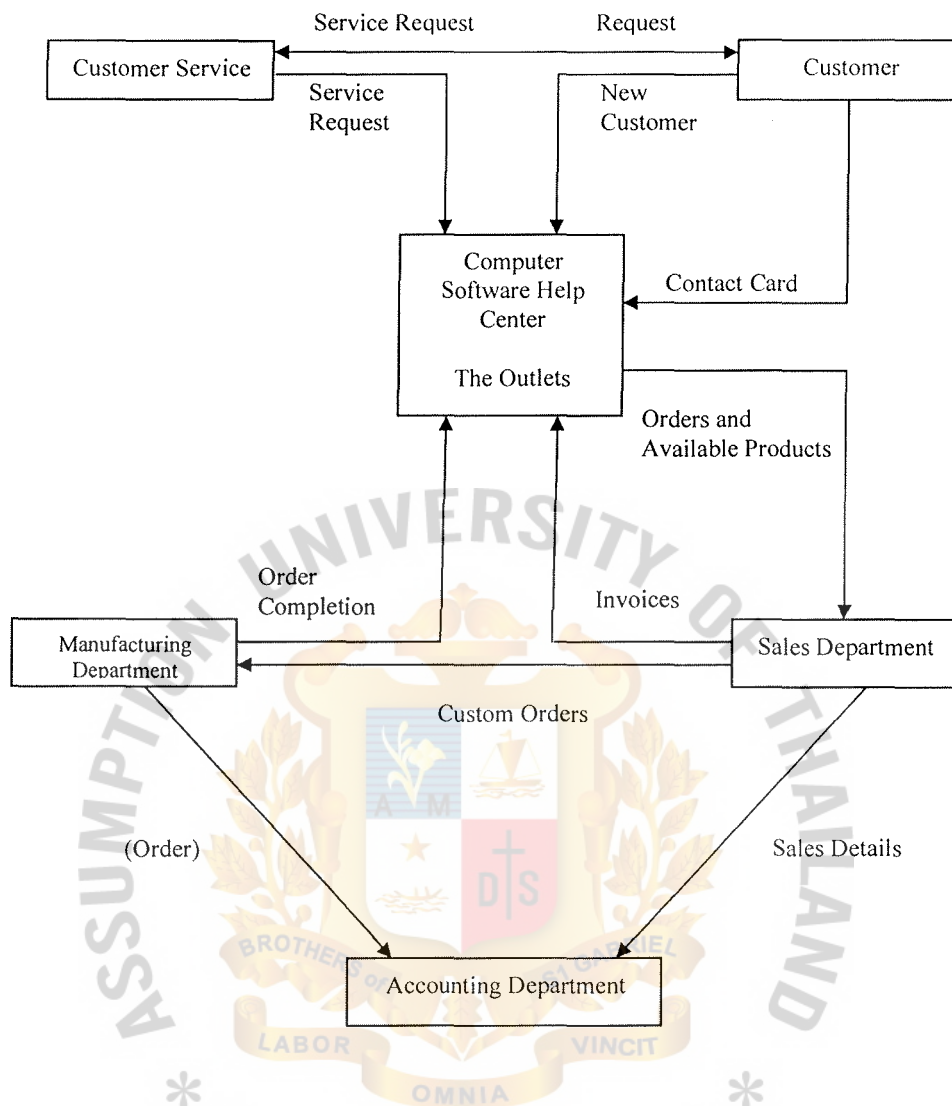
Figure 2.1. The Existing System.
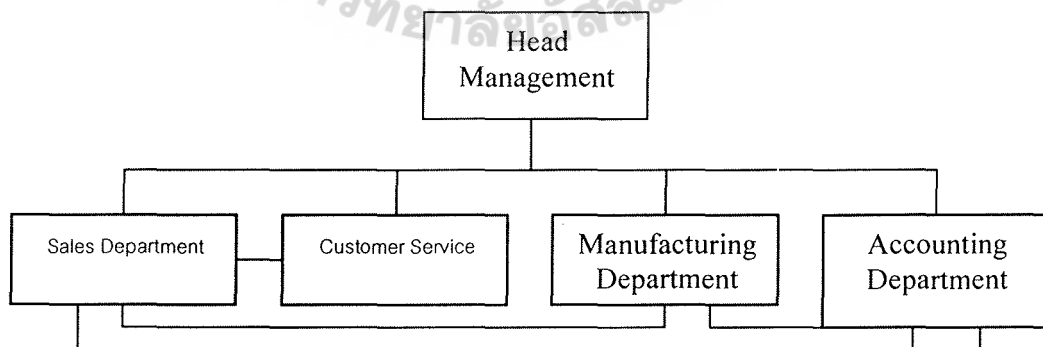
Figure 2.2. Organization Chart for Computer Software Help Center.

23

2.7 Existing Business Functions

There are many business functions which are part of the system and are required by the company staff members to fulfill it properly to make the work flow smoother and softer, so that it can be handled with ease.

(1) Inventory control of the products and services.

(2) Placement of new order to Manufacturing Department.

(3) Record of new customer information.

(4) Keeping records of customers' history of purchasing.

(5) Issuance of joining the center and getting a course certificate.

(6) Assignment of Invoice number for the purchase made.

(7) Assignment of new item numbers for the new product and service.

(8) Providing customers' after sale services.

(9) Summarized monthly or yearly reports for the management records.

2.8 Current Problems and Areas of Improvement

With having many physical center and manual handling it's always difficult for the original owner to look after them all the time, especially if they are far away from each other and in this case abroad. It's not possible for a person to be at two places at the same time. Everyone prefers to be free of time obligations and would like to do things on its preferred time and release some tensions. Some of the problems occurred are:

(1) Manual process is timely and has become old-fashioned as the business rapidly grows.

(2) Keeping inventory records, bookkeeping and providing customer services is getting harder as Catalog of the company grows. This takes a longer period of time to process simple actions.

(3) Not all the items available can be put into the showroom; more places are needed for the things to place and security is necessary as well.

(4) Customers' data is kept in the books and sometimes take a long time just to deal with the customer. This is also the reason why sometimes customer service takes a long time because information needs to be cross checked.

2.9   Existing Computer System

Only the manager has a stand alone personal computer in the office. No networking or Internet connection is available at the moment to help them in a way of research or communication. Purpose of that computer is to simply help prepare some reports from the manual records to present it to the management. The main applications used are Microsoft Word and Microsoft Excel. All the database of merchandises and customers are kept in the normal ledger books. Manual handling is done whenever any customer places an order. Even when its time to reorder any product, manual scrutiny is needed to be done before to see how much stock is available in hand and how much should be reordered.

III. THE PROPOSED SYSTEM

3.1 System Specification

The proposed scheme is that company should use the website to promote its products and use Internet medium as a way to advertise and attract more customers. With the use of the Computer System, which includes the use of computers and Internet technology, the company could lower its expenditures and could gain more profits. It becomes easier to handle the things online as anybody could access the website from anywhere, anytime and at their own convenience.

The system will facilitate the various processes of the physical shop as well and solve the problems taking place from the existing manual processes. Computer software help center desires to offer the effective response to the customers, requests with the computerized database and information system, in order to gain more customer contentment and which will lead to more sales.

According to the previous chapter, computer software help center now insists to use effective techniques to sell the products to customers and handle information professionally .The organization wishes to offer efficient response to the customer', to give them an opportunity to buy things at their own convenience, as people, these days, tend to make themselves more relaxed and prefer things the trouble-free way. This can attract more customers and give them satisfaction to do shopping while they are working, relaxing or just having fun time with their family member.

This is what people call freedom and not attached with any strings. Giving more ways for the customers to do shopping and make them interested into buying process, rather than coming to physical store and then try to find something they like. Physical shopping requires more time than the new technology or the Internet way.

26

The proposed plan is that the company should use the website to bolster its products and the Internet agent as a way to promote and invite more clientele. With the use of a Computer System, which includes the use of computer and Internet technology, the company may well lower its expenses and make bigger profits. It develops into an easier way of handling things online as anybody can access the website from wherever, anytime and at their own expediency.

In order to achieve the target, the new proposed system should have the requirements as follows:

(1)   Website encompassing all the information about the products and company.

(2)   Should be simple enough for the visitors and customers to look around the website for different products, without being lost.

(3)   Should be easy enough to create, update and delete information concerning to the management request, such as old product information.

(4)   Security for online shopping.

(5)   Database replacing the manual system to facilitate all the departments to systematically keep track of customer contacts and solving problems taking place from the current manual system.

(6)   Staff member should be able to print requested reports, such as receipts and invoices etc rather than lettering them by hand.

3.2   System Design

The new system is created to meet all the users' requirements as described earlier. New website and database are designed under the Client-Server architecture. The design phase expands and details the analysis by taking into consideration all the insinuation and precincts. The proposed design is to specify a working solution that can be easily translated into programming code such as website, database; communication and so on.

The objectives of the design are to improve the resource efficiency and reduce cost and additionally making the maintenance and modification easier to oversee. From the clients view making the website interaction and navigation easy to enough for them to search around, place orders and communicate with the company.
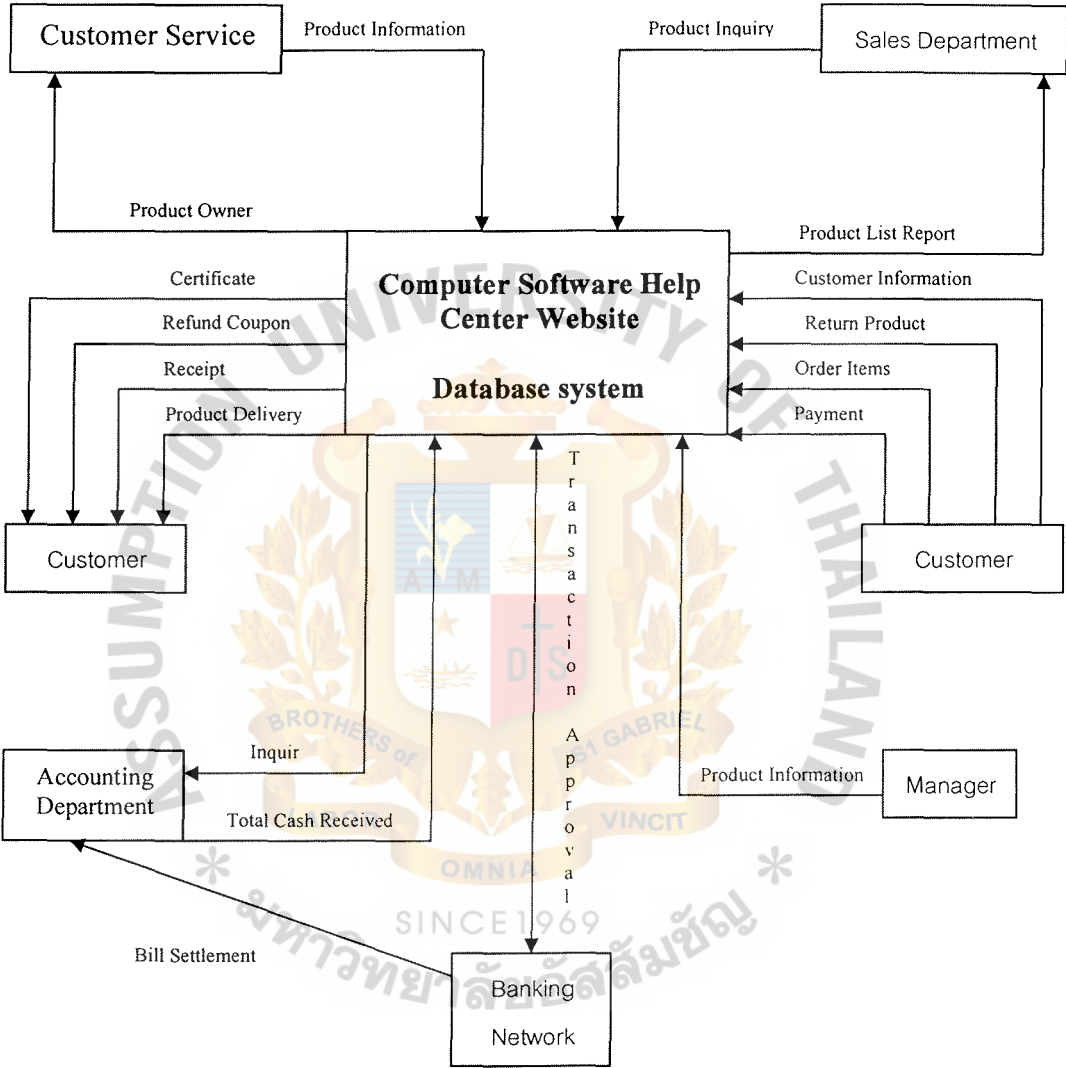
Figure 3.1.   Diagram of interaction with the Proposed System

28
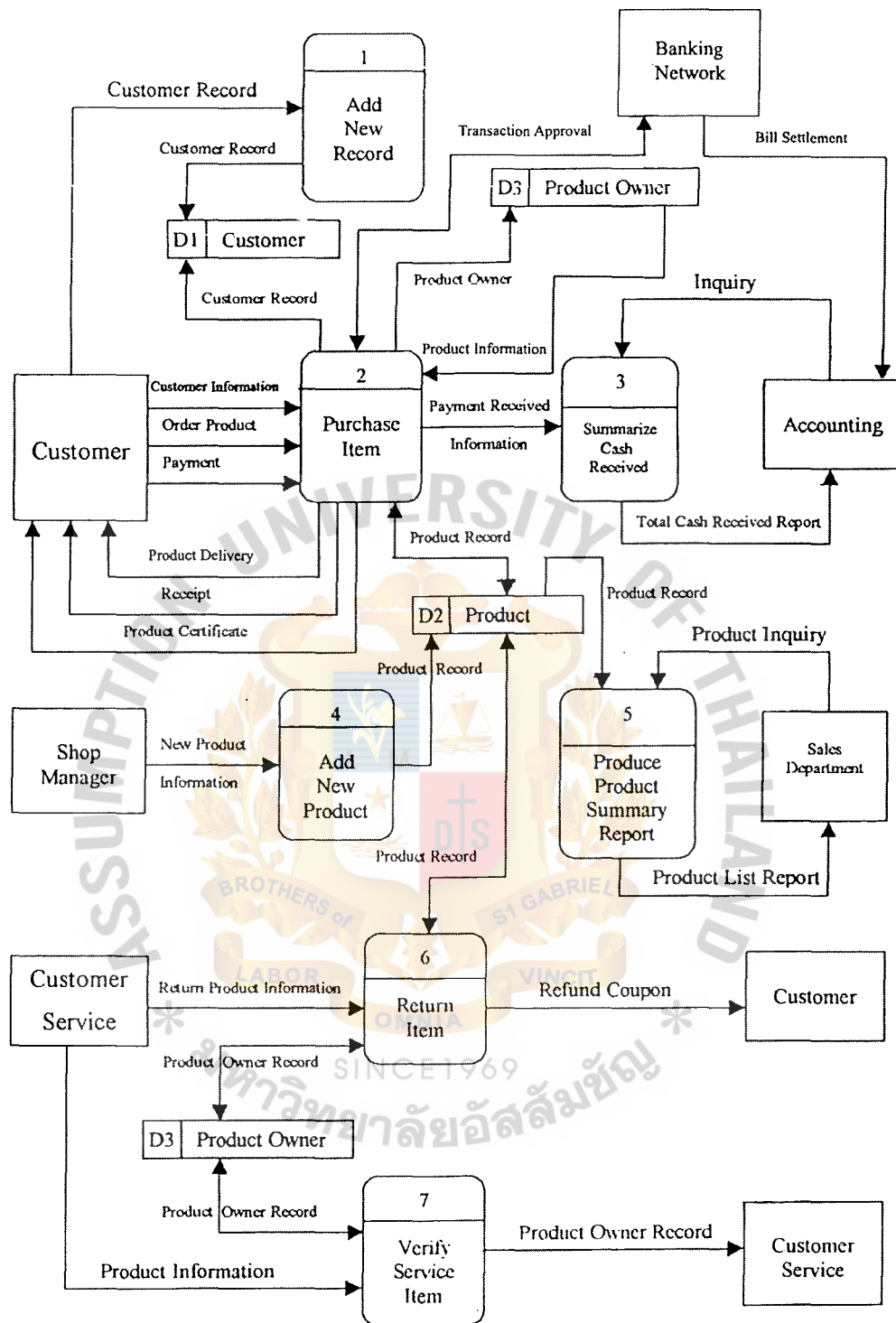
Figure 3.2.   Data Flaw Diagram of the Proposed System

In Figure 3.2 above, the design system has also defined the data flow diagram which includes seven processes in the new system as follows:

29

(1) Adds New Record - This module is used to insert new customer records into the database, update existing record on database and delete existing record from database. The basic data construction consists of Customer Name, Address and Telephone number.

(2) Purchase Items - This module is for the Sales Department, when customer places an order. The process is used to create invoices, receipts, print certificate and send the chargeable amount and invoice number to Process 3. The basic data construction consists of Customer Record, Product Record and Term of Payment.

(3) Summarize Cash Received - This module is for purpose of calculating the actual cash received for Accounting Department. The process will determine the term of payment and then subtract any sub-charges. The basic data construction consists of Invoice Number and Term of Payment.

(4) Adds New Product - This module is for entering the new product information into the system, which will be done by the organization manager. The basic data construction consists of Product Code, Product Name, Product Description and Product Price.

(5) Product Summary Report - This module is for retrieving the product information and print repot as requested. The basic data construction consists of Product Code, Product Name, Product Description and Product Price.

(6) Return Item - This module is for retrieving the product information to be returned. Then process will calculate the after deduction amount or amount to be paid for the exchange product. The basic data construction consists of Product Code, Product Name, and Product Owner Record.

(7) Service Item - This module is for verifying the product to be serviced by customer. All the products must be verified to provide the free service to the customers. The basic data construction consists of Product Code, Product Name and Product Owner Record.

3.3 Hardware and Software Requirement

To serve the new system, company website and the database system, personal computers are the main communication devices for the man and machine interface. Four computers are required to be installed, one at the manager's office is already available and can be connected as well and one out of them must be installed as server to control all the other computers, making all the computers interconnected so that all the computers work like Local Area Network (LAN).

Server will be used to store all the database and allowing file sharing between different departments and staff members. The personal computers then will be connected together from each department, such as Manager's office, Sales Department, Customer Service and Accounting Department.

As seen in Figure 3.2 below, we can see that there is one server and another four clients, installed in the new system, plus we have the E-Commerce Service Provider which will provide the company with the Internet access and hosting of the website plus other features. The server is also connected with the Dot Matrix printer to print out invoices at the Sales Department and Laser printer at the Manager's office for the report printings and all. With this Manager also has control over what reports are printed and the facilities available are not used for personal purposes.

The server would also be able to connect to internet to check the website status, such as online orders, customer services. Mainly personal computers would be used to help staff members in a way that they can do their work better and more efficiently. For

31

example Joining Course Certificates looks much better printed than hand written; customer information can be easily found and sorted in the database and can provide faster interaction with the customers.
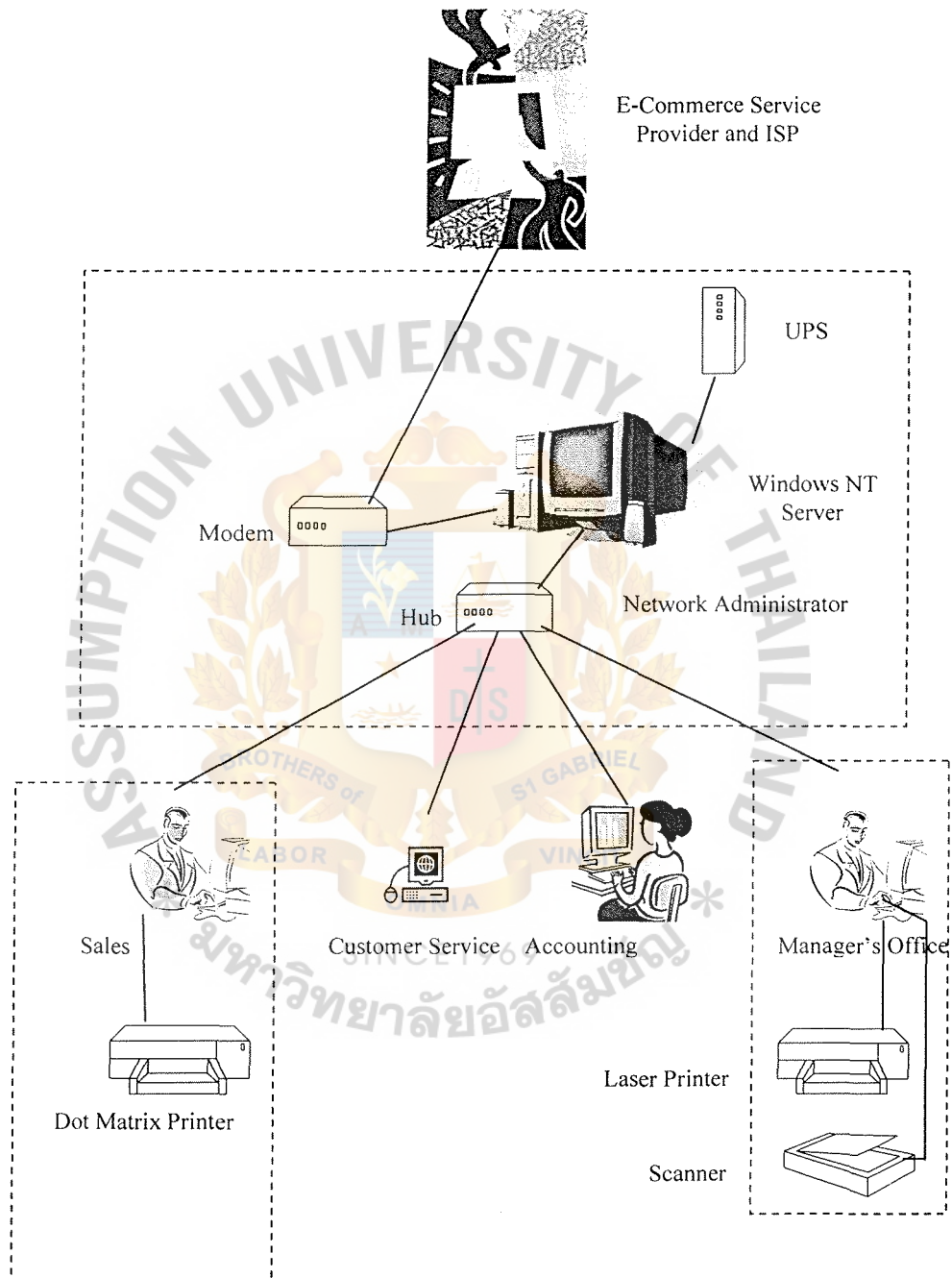
Figure 3.3.   Hardware Configuration.

Microsoft has provided mostly all the software, which can transform a normal Personal Computer into a fully working server, such as Application Server and Database Server. Mainly the installation of Windows Server 2003 converts a Personal Computer to a server as Windows Server 2003 is designed for Server and provides all the functionalities even though installed on a normal PC. Mostly all the developers use Visual Basic language to develop Front-end Software which are compatible with all the Microsoft products. Mostly all software are designed to integrate with Microsoft Windows, therefore software can be easily upgraded in the future as well for the future projects.

Company has decided to use the Microsoft Office 2000 suite which seems to be more reliable than Microsoft Office XP suite, as major software for the purpose of interaction between the LAN users. The hardware and software specifications are shown in Tables 3.1 and 3.2 correspondingly.

Table 3.1.   Hardware Specification for the Server.

Hardware	Specification
Central Processing Unit (CPU)	Pentium IIII 2.5 GHz or higher
Cache Memory	512 KB or higher
RAM Memory	512 MB or higher
Hard Disk	100 GB or higher
CD-ROM Drive	52X or higher
Floppy Drive	1.44 MB
Network Adapter	Ethernet 10 Base T
Display Adapter	128 MB SVGA card
Display	17" screen Monitor
Printer	Dot Matrix and Laser Printer
Uninterrupted Power Supply (UPS)	220 Vac, 50 Hz, 20 Amp

33

Table 3.2. Software Specification for the Server.

Software	Specification
Operating System	Microsoft Windows Server 2003
Web Server	Microsoft IIS 2.0
Application Server	Microsoft ASP
Database Server	Microsoft SQL Server 6.5

In the Computer Software Help Center Database system, the client machines will have enough capacity to run the Front-end applications and Web Browser, such as Microsoft Internet Explorer, Netscape Navigator and the Microsoft Office 2000 applications. In general it should give a hardware specification high enough to run Microsoft Windows XP and Microsoft 2000, as Windows XP is faster and more reliable than other Windows and does not need high specifications to run on a personal computer, which will save costs as well. The hardware and software specifications for each client machine are shown in Tables 3.3 and 3.4 respectively.

Table 3.3. Hardware Specification for the Each Client Machine.

Hardware	Specification
Central Processing Unit (CPU)	Pentium IIII 1.5 GHz or higher
Cache Memory	256 KB or higher
RAM Memory	128 MB or higher
Hard Disk	40 GB or higher
CD-ROM Drive	52X or higher
Floppy Drive	1.44 MB
Network Adapter	Ethernet 10 Base T

Table 3.3. Hardware Specification for the Each Client Machine (Continued).

Hardware	Specification
Display Adapter	SVGA card
Display	15" screen Monitor
Printer	Dot Matrix and Laser Printer
Uninterrupted Power Supply (UPS)	220 Vac, 50 Hz, 20 Amp

Table 3.4. Software Specification for the Each Client Machine.

Software	Specification
Operating System	Microsoft Windows XP
Web Browser	Microsoft Internet Explorer 5 or higher
Application Software	Microsoft Office 2000

We do need Ethernet adapter for the client machines as well; otherwise the Server and client computers cannot establish the connection to share the information together.

3.4   Security and Control

The proposed system has three levels of user verification processes. These user verification processes compose of the authorized username and password, but only the username verification does not always guarantee one hundred percent security. The users of the system will be divided into seven levels of authorizations as depicted in the Table 3.5 below.

Table 3.5. Authorization of the System.

Level	Description	RU	WU	RP	WP	PC	UM	NM	DM	AM
0	Unauthorized User	X	X	X	X	X	X	X	X	X
1	Guest	√	X	X	X	X	X	X	X	X
2	Data Entry	√	√	X	X	X	X	X	X	X
3	Officer	√	√	√	X	X	X	X	X	X
4	Supervisor	√	√	√	√	√	√	X	X	X
5	Administrator	√	√	√	√	√	√	√	√	X
6	Manager	√	√	√	√	√	√	√	√	√

RU Read unprotected information

WU Write unprotected information

RP Read protected information

WP Write protected information

PC Password change

UM User Management

NM Network Management

DM Database Management

AM Administration Management

Data encryption and decryption engine is installed in the system as well, to make sure in case any intruder enters the system, he cannot read the encrypted information. This ensures more security levels to the system. Likewise database will only store encrypted data and to decrypt the information and make it readable a person must know which data encryption is used and how to convert data back to readable format. This will make the intruder's job harder to find readable information from the system.

3.5 Cost and Benefit Analysis

(1) Costs of Manual System

Table 3.6. Manual System Cost Analysis, Dinars.

Cost Items	Year				
	1	2	3	4	5
Fixed Costs					
Typewriter (1 unit)	8,000	-	-	-	-
Calculators (5 units @ 400)	2,000	-	-	-	-
Total Fixed Costs	10,000	-	-	-	-
Operating Cost					
Salaries					
Manager (1 @ 30,000 per month)	360,000	396,000	420,000	444,000	480,000
Salesperson (3 @ 8,000 per month)	288,000	324,000	360,000	396,000	432,000
Accountants (4 @ 9,000 per month)	432,000	480,000	528,000	576,000	624,000
Total Annual Salary	1,080,000	1,200,000	1,308,000	1,416,000	1,536,000
Office Supplies & Miscellaneous Cost					
Utilities (per annum)	40,000	46,000	50,000	55,000	61,000
Stationary (per annum)	30,000	35,000	38,000	42,000	47,000
Paper (per annum)	136,000	145,000	153,000	160,000	172,000
Miscellaneous (per annum)	60,000	63,000	67,000	72,000	80,000
Total Annual Office Supplies	266,000	289,000	308,000	329,000	360,000
Total Annual Operating Cost	1,346,000	1,489,000	1,616,000	1,745,000	1,896,000
Total Manual System Cost	1,356,000	1,489,000	1,616,000	1,745,000	1,896,000

Table 3.7. Fives Years Accumulated Manual System Cost, Dinars.

Year	Total Manual Cost	Accumulated Cost
1	1,356,000	1,356,000
2	1,489,000	2,845,000
3	1,616,000	4,461,000
4	1,745,000	6,206,000
5	1,896,000	8,102,000
Total	**8,102,000**	-

(2) Costs of Computerized System

Table 3.8. Computerized System Cost Analysis, Dinars.

Cost Items	Year				
	1	2	3	4	5
Fixed Costs					
Hardware Cost					
Computer Server with UPS	25,000	25,000	-	-	-
Workstations (4 @ 11,500)	46,000	46,000	-	-	-
Laser Printer	55,000	55,000	-	-	-
Dot Matrix Printer	8,500	8,500	-	-	-
Scanner	12,000	12,000	-	-	-
Token Ring Hub	13,500	13,500	-	-	-
Total Hardware Cost	160,000	160,000	-	-	-
Network Cost					
Domain Name Registration	1,500	1,500	1,500	1,500	1,500
Website Development	30,000	-	-	-	-
Internet Service charges	24,000	24,000	24,000	24,000	24,000
Total Network Cost	55,500	25,500	25,500	25,500	25,500
Software Cost					
Microsoft Windows Server 2003 & XP	15,000	15,000	-	-	-
Microsoft Office 2000	6,000	6,000	-	-	-
Total Software Cost	21,000	21,000	-	-	-
Implementation Cost					
Training	20,000	20,000	-	-	-
Setup	32,000	32,000	-	-	-
Total Implementation Cost	52,000	52,000	-	-	-
Total Fixed Costs	288,500	258,500	25,500	25,500	25,500
Operating Cost					
Salaries					
Manager (1 @ 33,000 per month)	396,000	414,000	432,000	456,000	480,000
Administrator (1 @ 15,000 per month)	180,000	198,000	216,000	240,000	264,000
Salesperson (2 @ 9,000 per month)	216,000	240,000	264,000	288,000	300,000
Accountants (1 @ 10,000 per month)	120,000	132,000	156,000	180,000	198,000
Total Annual Salary	912,000	984,000	1,068,000	1,164,000	1,242,000
Office Supplies & Miscellaneous Cost					
Utilities (per annum)	40,000	46,000	50,000	55,000	61,000
Stationary (per annum)	15,000	17,500	19,000	21,000	23,500
Paper (per annum)	36,000	45,000	53,000	60,000	72,000
Miscellaneous (per annum)	30,000	31,500	33,500	36,000	40,000
Total Annual Office Supplies	121,000	140,000	155,500	172,000	196,500
Total Annual Operating Cost	1,033,000	1,124,000	1,223,500	1,336,000	1,438,500
Total Computerized System Cost	1,321,500	1,382,500	1,249,000	1,361,500	1,464,000

38

Table 3.9.   Fives Years Accumulated Computerized System Cost, Dinars.

Year	Total Computerized Cost	Accumulated Cost
1	1,321,500	1,321,500
2	1,382,500	2,704,000
3	1,249,000	3,953,000
4	1,361,500	5,314,500
5	1,464,000	6,778,500
Total	**6,778,500**	-

(3)   The Comparison of the System Costs between Computerized System and

Manual System

Table 3.10.   The Comparison of the System Costs, Dinars.

Year	Accumulated Manual Cost	Accumulated Computerized Cost
1	1,356,000	1,321,500
2	2,845,000	2,704,000
3	4,461,000	3,953,000
4	6,206,000	5,314,500
5	8,102,000	6,778,500

As shown above in the table, it can be seen obviously that the cost

difference between the manual system and the computerized system is only in the

first and second year of implementation of new system, which is mostly from the

Hardware and Software installation and the training course made available to

learn the new system

However in this case we cannot determine the cost and benefits from the

Mathematical statistics, since the increasing cost came mainly from the

39

computerized installation and while the benefits gained came from the re-entry of the lost customer or so called the opportunity. Less staff needed to handle the tasks, which also reduces costs since more tasks could be carried out with the use of a computerized system.

(4)   Benefits

From the above explanation, we can say that benefits came in aspects of tangible and intangible benefits. A new proposed computerized system will show the benefit of its utilization as follows:

(a)   Tangible Benefits

Certainly after utilization of the new system, Programmer Software Help Center can serve customers with full satisfaction in terms of speed and accuracy. The center can serve more customers than ever and can serve as many as the number of incoming customers, which means that company sales volume certainly will increase.

Payback Period

$$\text{Payback Period} = \frac{I}{(1+T)*R} - 1$$

Where   I   =   Investment

T   =   Tax Rate

R   =   Annual Saving

Total Investment =   Cost of Hardware + Cost of Software + other expenses

=   5,818,051.00

Tax Rate   =   0.10

Annual Saving   =   3,129,455.92

$$\text{Payback Period} = \frac{5{,}818{,}051.00}{(1+0.10)*3{,}129{,}455.92} - 1$$

$$= \frac{5{,}818{,}051.00}{3{,}442{,}401.512} - 1$$

$$= 6.9 \text{ months or} \cong 7 \text{ months}$$

Net Present Value (NPV)

Net Present Value is a discount cash flow approach based on the present value of money in the period of time. The Net Present Value formula is shown below:

$$NPV = \frac{R}{(1+k)^1} + \ldots + \frac{R}{(1+k)^n} - PV$$

Where

NPV	=	Net Present Value	
PV	=	Cost of Proposed System	= 5,818,051.00
R	=	Cash Inflow or Annual Savings	= 3,129,455.92
K	=	Interest Rate or Discount Rate	= 7.5%
N	=	Number of Years saving Available =	5 Years
NPV	=	4,846,312.35	

From the calculation above we can conclude that after using the new proposed system instead of manual, the payback period will be within 7 months and NPV

Calculation shows a positive figure, assuming that discount rate is 7.5% for the next 5 years.

Therefore, it will be worth bringing in the proposed system of introduction of the website and computerized system, instead of manual system continuation and opening new physical center.

The details regarding the payback analysis for the proposed system with the approximate costs and benefits which the company may incur during the coming period of 5 years for the proposed system, is shown in Tables 3.11 and Figure 3.3 respectively. Figure 3.4 is used to present the break-even point analysis to see when the company will break-even and start making profits onwards.

(b)   Intangible Benefits

Intangible benefits are the expected benefits from this project. The trigger of this project is that the company wants to open a new channel and at present is using manual processing, which causes lack of accuracy and slow in processing. Therefore, after implementation of the new proposed system and good training process, those problems can be solved and these can't be measured in terms of money.

Servicing will become a lot easier with higher speed of processing requests the most important factors, which surely will help make more customers satisfied.

Table 3.11. Payback Analysis for the Proposed System, Dinars.

2Cost Items	Year				
	0	1	2	3	4
Development Cost	-1,321,500.00	-1,382,500.00	0.00	0.00	0.00
Operations & Maintenance	0.00	0.00	-1,249,000.00	-1,361,500.00	-1,464,000.00
Discount factor of 7.5	1.000	0.925	0.856	0.791	0.732
Time adjusted costs (adjusted to present value)	-1,321,500.00	-1,278,812.50	-1,069,144.00	-1,076,946.50	-1,071,648.00
Cumulative time-adjusted costs over time	**-1,321,500.00**	**-2,600,312.50**	**-3,669,456.50**	**-4,746,403.00**	**-5,818,051.00**
Benefits derived from operation of new system	0.00	2,157,264.00	3,005,546.00	3,742,972.00	4,275,213.00
Discount factor of 7.5%	1.000	0.925	0.856	0.791	0.732
Time adjusted benefits (adjusted to present value)	0.00	1,995,469.20	2,572,747.38	2,960,690.85	3,129,455.92
Cumulative time-adjusted benefits over lifetime	**0.00**	**1,995,469.20**	**4,568,216.58**	**7,528,907.43**	**10,658,363.35**
Cumulative time-adjusted costs + benefits	*-1,321,500.00*	*-604,843.30*	*898,760.08*	*2,782,504.43*	*4,840,312.35*

Payback Period is approximately 7 months, as the Proposed System is developed over 2 years
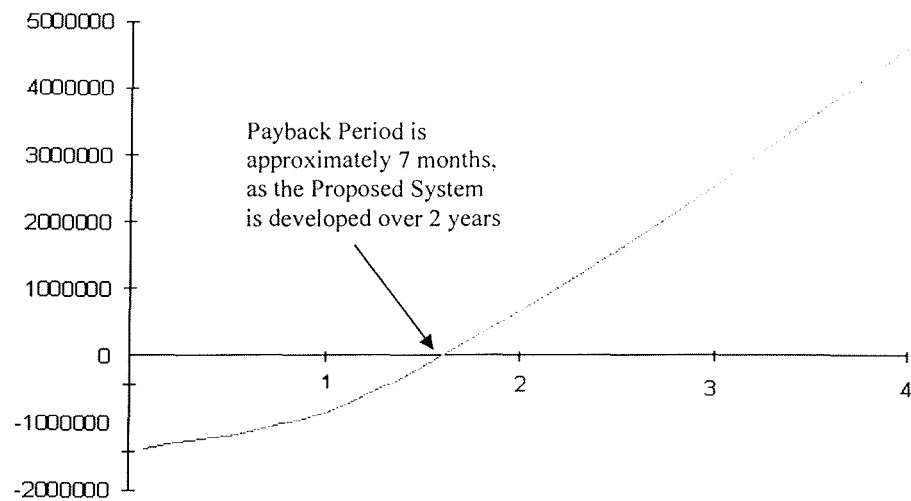
Figure 3.4.   Payback Analysis.
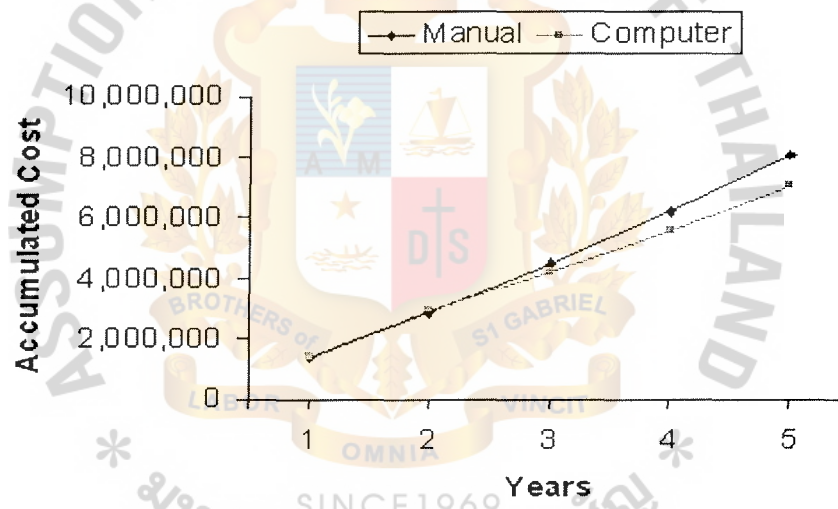
Figure 3.5.   Cost Comparisons between Existing System and Proposed System.

IV. MARKETING ANALYSIS

4.1 Benefits of the Internet

Some of the main general benefits of being connected to the Internet for any business would be:

(1)   Reduce the costs related to business development.

(2)   Test market new products and services.

(3)   Take advantage of the newest technologies involved with the Internet and the WWW to more effectively find and serve customers/clients on a global scale, increasing sales and profits.

(4)   Provide top-notch, on-line support for customers.

(5)   The costs of using the Internet and the WWW are much less than they would be for using conventional methods of marketing/advertising, with 24 hours per day, 365 days per year exposure in a more cost-effective way (regional, national and international).

(6)   You can promote your products and site in a number of ways so that people will find and use it.

Most people get into internet marketing because it looks like a good way to make money from home. These people usually don't realize that initial sales are only a small piece of the pie. The Internet has created an interesting paradox in the world of business. Email, in particular, has created an informal communications environment where the emphasis is on speed of thought. However, at the other end of the spectrum, the E-Commerce website is a very formal environment where the user wants precise information.

45

Both of these developments are having major impacts on business and are changing the very shape of the organization as we enter the new millennium. The Internet challenges the organization to be both formal and informal, to be highly flexible and yet highly structured.

In The Digital Age or Internet Era, it pays to care. Many of the products made today are becoming commodities with the same basic components and performance levels. To differentiate itself, a company can start by using the Internet to engage with its customers more, seeing them as partners so as to develop solid, long-term, mutually profitable relationships. By developing products that truly match customer needs, by focusing on service and by being friendly and helpful.
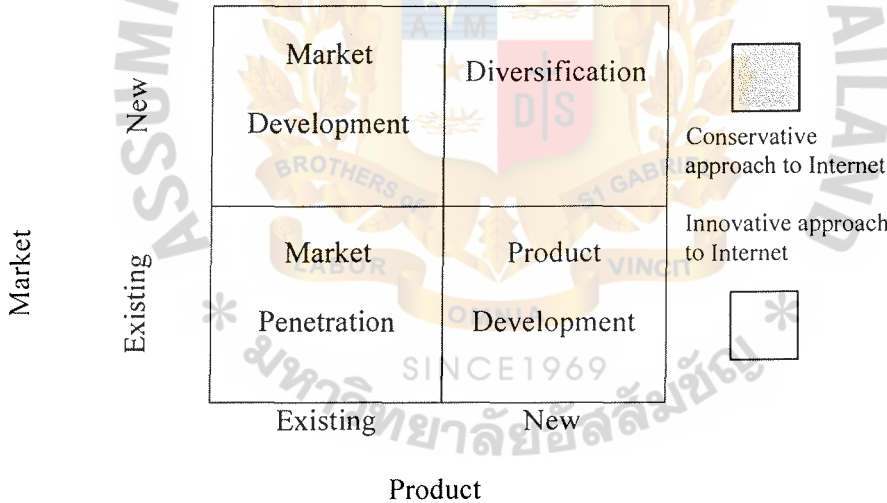
Figure 4.1. Market and Product Strategy Grid.

4.2 Target Customers

Old customers would be added into the target as well, because all the businesses do depend a lot on the repeat sales to the old clients. When selling on the internet its

46

really hard to setup the target segment, therefore the target customers will also include people who are interested in learning service and related products.

It is vital that we are able to look at the world with fresh eyes and are willing to learn new things, new business practices. It is vital that we take nothing for granted; that we assume nothing, that we question everything and that we particularly question the things that we believe to be absolutely true. Because setting up target customers is a very crucial assignment and can severely affect the whole business, such as wrong segment.

4.3 Why to Sell Online?

If the company decides to open up a center in another area, there are many things that we should keep in mind. For example, if a location is found at a decent rent, say $1,000.00-$2,000.00 per month for 1,000-3,000 square feet which is quite difficult to find in decent places, we might consider it. But that's only the very beginning. A security deposit and at least one extra month's rent are standard in most commercial rentals, as are monthly maintenance charges for common areas, parking lot, etc. Then we add center fixtures and perhaps general fix up, painting, flooring, furnishings such as counters and cabinets, alarms, locks, bolts, lighting, cash register, telephones, fax, office desk, chair, accessories, etc. If the person in-charge can't be there all the time, key employees become necessary to deal with every situation. Advertising in local papers, the Yellow Pages, perhaps local cable television, add to the operating expenses as do local business tax, merchant operating license fees, etc.

Before the store is even opened a conservative startup sum is already up in mid-five figures, as a minimum. Unless we can obtain adequate outside financing, starting a center, almost any center, is an expensive proposition that requires much planning, saving, and serious consideration before undertaking. Many centers have at one time or

another been involved in physical retailing and know this. They may have done very well in it, or not. In any case, they are very much aware of the expenses and hard work a store requires of its owners to even pay for itself and especially to make it a success.

Whether we open a web center or a physical retail center, the inventory of wares must be there. It varies depending on the owner, it should be mentioned though that to open a web-center with less than 100 items on it is hardly worth the bother. On the other hand, there is no shame in starting small and adding to inventory constantly and frequently. It's actually good to do because then there is always something new and fresh to present to customers.

Office supplies, etc., would also be necessary to purchase for a physical center so the cost for them would be similar. However, more printing paper for invoices is probably needed for a web-center and less receipt books as used in a physical center.

Even if we open up a business and then suddenly if the economic situation changes then it could even lead to shutting down the business because of over investing. Asian economy suffered very badly when people were spending more but actually didn't have enough money to payback what they were spending. It led to shut downs of hundreds of companies and an enormous amount of people were unemployed, one situation led to another and another led to another.

The company may have enough money to open up a business at a new situation and bear the cost of closing, but being on the safe side is always a plus. If we plan things ahead it becomes easier to deal with the situation if in case that situation may come and then those plans could be put into action, so that it leads to less cost expenditure and less risk of losing something.

Company website will help the customers to find what they are looking for and also try to provide the information on the courses and service in it. In doing this, the

company could generate more customer attention towards the services and try to make them satisfied with the products and services. The company also provides certificates and rewords to make customers feel more satisfied in that they are getting the best service and not duplicates in anyway.

The company will also provide a guarantee to return the goods within a certain period of time after they have received the goods, if they feel that they have not received what they ordered, such as different courses and products or if goods have defect in any way at all.

There are many reasons to open up a web-center than a physical center. An Internet website has with the whole wide world for a marketplace! Specially when compared with all the expense, work, limitations and headaches involved in operating a physical center.

Building a website is much cheaper than opening another physical store. Suffice it to say that it all depends on what we want and to whom we turn to. The best website writers employed by graphic design companies and Internet website hosts charge top money while freelancers who often are just as good come a lot cheaper. Still we could figure anywhere from $500.00 to $3,000.00+ to have a catalog website designed, from Ford to Cadillac style.

4.4   What Is Needed?

What exactly do we need to setup a web-center is quite simple, the basic brief checklist of the minimum equipment is:

(1)   A computer with Internet access

(2)   A scanner, a printer

(3)   Merchandise inventory: Books, CDs, etc.

The serious Internet seller usually has an additional camera, a regular photo print ditto, and/or a digital camera, not to mention a separate telephone line for an exclusively-for-Internet connection, or a cable modem or DSL line. Other optional office equipment may include a small photocopier, and a fax machine.

Every web site is quite a wonder of construction and composition. In its most simple form, it's just a page with some information on it, perhaps an image or two, but basically a billboard. An information site may have lots of pages and hundreds of links to interconnecting pages and/or other sites.

But a catalog web site would be necessary for this company, because it belongs in the top category of intricate web designs. Not only does it provide information but also more interaction than many other information-only sites. It has tons of images, descriptions, and hundreds of links to enable navigation among its many category pages, follow up pages, order forms, even shopping carts, internal search engines, and links to other sites as well. It is also constantly changing as merchandise is sold and added.

When selling on the Internet or physical location, delivery of the wares is done by postal mail or package delivery service. Packaging, wrapping such as cartons and boxes, are therefore necessary for selling by mail.

Books and CDs must be properly packaged to arrive in the same condition they left. Poor or sloppy packing of shipments spells amateur about the site owner so this aspect cannot be stressed enough. Broken items because of poor packaging is a big disappointment to the customer and a total loss to the seller. It therefore pays to invest extra effort in insuring that vulnerable items are well protected.

With this mindset when wrapping for postal or parcel service delivery, a mail order package from you should be able to withstand a ride on the space shuttle without

anything bad happening to its contents. Based on the above prices and fees ranges, we can calculate an approximate personalized budget for starting the type of web center we envision.

Website is planned, even designed and is ready to launch. Full of books, CDs, and new courses, it's awaiting its entry into the wonderful world of the Web, after studying how others do it, shopping policy in place, and even spell-checking all the descriptions that took seemingly forever to compose, complete with features and prices.

4.5 SWOT Analysis and Strategies

The primary purpose of the SWOT analysis is to identify and categorize each significant factor, positive and negative, into one of the four categories and allow us to take an objective look at our business.

Strengths

(1)   Expertise education skill

For more than 15 years of being in the education field business, Programmer Software Help Center personnel are the experts who highly specializes in the education field and fully understand it.

(2)   Quality of Product

It has been agreed that Programmer Software Help Center provides the best education materials and tools to the student.

(3)   Various old programs

All the old courses that have been given to the student will be saved and ready in case any one asks for it.

(4)   Superior services

With the collaboration of Programmer Software Help Center expert and good teamwork, the customer can enjoy the excellent service which they can get

51

from the center, and nowhere else. Programmer Software Help Center staff will give the customer useful suggestions about the courses at Programmer Software Help Center as well as the sale force who will usually be in touch with the customer. When problem arises, whether it's a product or service problem, Programmer Software Help Center branch manager will take the corrective action immediately. The manager will carefully analyze the problem and find out the most appropriate solution for both parties in order to keep the high level of customer satisfaction.

Programmer Software Help Center website is one of the tools to enhance the customer relationships. Customers can find out useful information, notice the interest promotion, share their ideas, and contact Programmer Software Help Center expert to ask for more information. As per the objectives, Programmer Software Help Center website serves as the powerful marketing tool to encourage the offline sale and learn. Programmer Software Help Center website will allow the customers to visit 24 hours a day, 7 days a week, and at any place.

(5)   Good reputation

Programmer Software Help Center enjoy a positive reputation. This advantage, it turn, improves the cash flow of Programmer Software Help Center. The customers also rely on Programmer Software Help Center name. They usually become a routine student by repetitively visiting Programmer Software Help Center.

Weaknesses

(1)   Unrest in the Middle East could increase product prices.

(2)   Limited in sale personal.

The marketing coverage is limited due to the limitation in turn effects the sale volume and marketing coverage of Programmer Software Help Center products. However, the establishment of the website will help to lessen the effect of the weakness. The center should promote its website name by implementing the advertising and promotional plan in order to let the public know more about the education center.

Opportunities

(1) Internet industry is growing.

(2) Interest rates are declining.

(3) Increase in exports and expandable market, with new system.

(4) Form joint venture with companies to serve around the globe

(5) New website launched, will attract more people.

Threats

(1) Technical limitation of the electronic commerce in Middle East.

(2) Boosting advertising could come over some of the threats.

V. WEB DEVELOPMENT

5.1 Web Structure

The structure of the web is increasingly being used to improve organization, search, and analysis of information on the web. For example, Google uses the text in citing documents for search. We analyze the relative utility of document text, and the text in citing documents near the citation, for classification and description. Results show that the text in citing documents, when available, often has greater discriminative and descriptive power than the text in the target document itself. The combination of evidence from a document and citing documents can improve on either information source alone. Moreover, by ranking words and phrases in the citing documents according to expected entropy loss, we are able to accurately name clusters of web pages, even with very few positive examples.

The following guidelines are implemented to retain consistency of a "look and feel" on the Programmer Software Help Center website. The pages within the website will conform to the following guidelines:

(a) Affiliated sites will not identify themselves as "Programmer Software Help Center" and will affirm that they are not OFFICIAL pages of Programmer Software Help Center.

(b) All pages will include a title in the "head" element. The title will reflect the content of the page.

(c) The Programmer Software Help Center logo will be displayed in the upper left of all the pages.

(d) All links will be made by using relative paths rather than absolute paths. Pages in the same directory will not need paths; however stock images will require a relative path.

(e)   The page title will be displayed on each page.
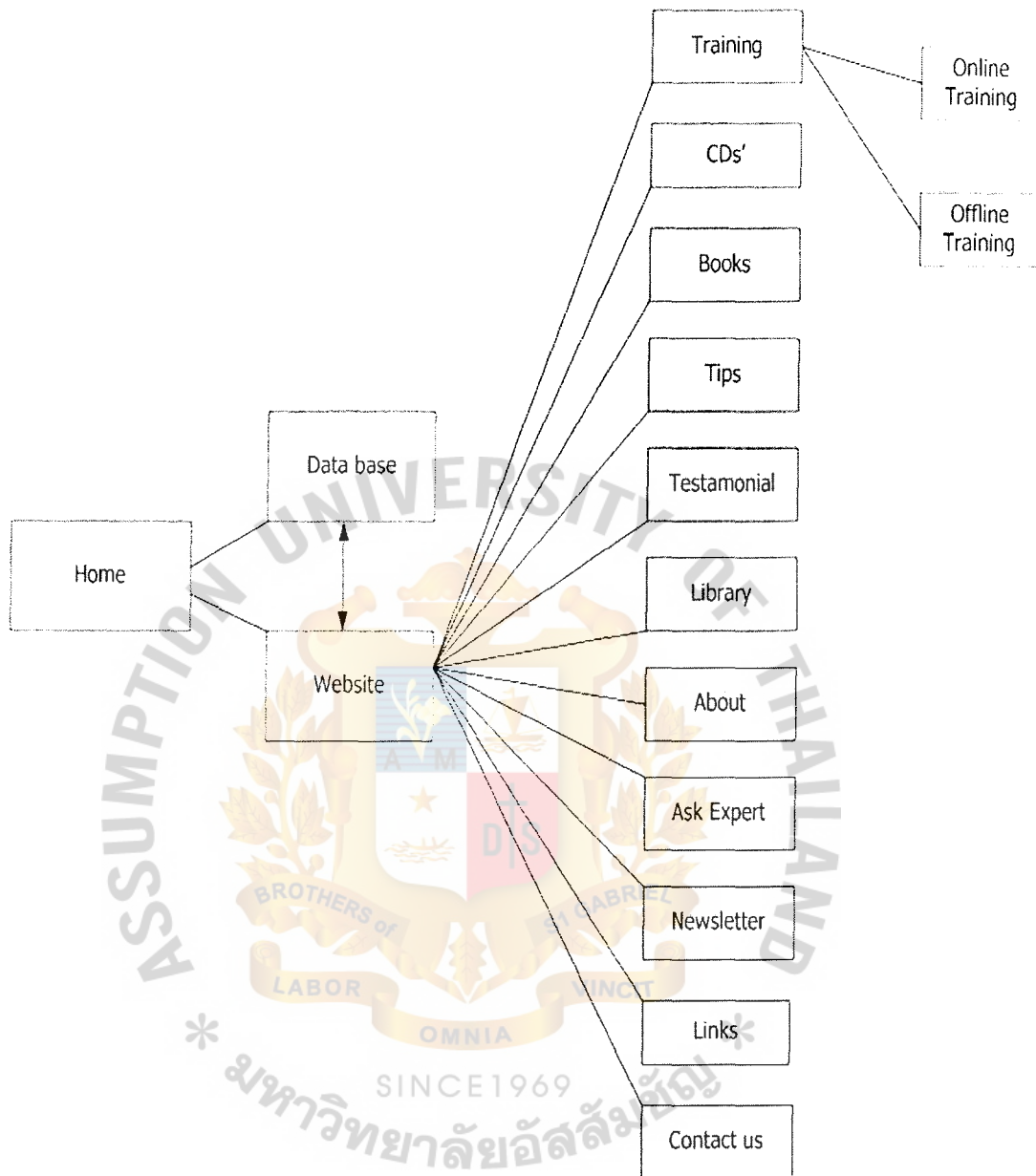
Figure 5.1.   Web Structure.

From Figure 5.1 of the Web Structure, we could see that the whole process is made up of many steps and folios. The website itself starts with the main page or so called Home Page, which incorporates all the features provided by the company to the customers through the website.

55

Home Page includes the Training, CDs, Books, Tips, Testimonial, Library, About, Ask Expert, Newsletter, Links, and Contact Us pages which provide customers and visitors with the options to look through the website and the products and services provided by the company.

Our products and service has been categorized to separate them in different pages but they are connected with each other by the product name. This allows customers and visitors to go through all the products that are currently available to public through the use of website. When finally if they have made the choice then they can order the products through Internet as well or Contact the company through manual means to make an order.

Website also provides customers with Username and Password so that when they come back again and visit the site they can Login into the system. After they login into the system they then will be taken to the New Products in the category that they are interested in automatically. Moreover, they will be able to continue them online training. This is done through checking the history of the customers' visits to the website and the products that they have ordered from the company. All this information should be kept in the database to keep track of all the visitors and customers so that the best services and products could be made available to them to persuade them to come again, with good services and quality products

5.2 Web Development

Mainly there are seven steps that any company or business can follow for the development and designing of any website.

(1) **Website Design** - before we can determine web site's requirements. Web site design concerns encompass a wide range of factors to be considered and

evaluated with regard to their effectiveness in supporting website's objectives. These may include, but are not limited to:

(a) **Deciding Scope of Features**: Producing a checklist of web site features that company wants in web site to have. It's always good to visit many websites of similar purpose to generate ideas for your own. Determine the degree of web site sophistication needed and the scope of user interaction that will be provided, e.g., online credit card processing, shopping carts, bulletin boards, chat rooms, site search, etc.

Web Site Design Desired Features Checklist

Prospective Title: _____

Prospective URL: _____

Planned Purpose: _____

BASIC FEATURES

Background Image:___	Site Search:___
Photos:___	Animation Clip Art:___
Recommend Us:___	Contact Us:___
Password Protected Pages:___	Product Catalog:___

ADVANCED FEATURES

Chat Room:___	Message Forum:___
Flash/Animation:___	Product Database:___
Streaming Audio/Video:___	Subscription Access:___
Shopping Cart:___	Credit Card Processing:___

Figure 5.2.   Website Features Checklist.

57

(b) **Deciding Page Layout & Navigation Scheme**: Estimation of the total number of web pages and name and define the purpose for each one. Plan the positioning and contents of the pages common areas - headers, footers and side-links. Also, deciding upon a navigation scheme that will be consistent throughout the website, because consistency is always needed so that the visitor doesn't get lost in the website in search of simple information. This may be as simple as a static set of side links on every page or as sophisticated as a pull-down cascading menu system which becomes more detailed as you go deeper into the site. Visiting web sites of similar purpose or surfing the internet freely generates quite a lot of ideas of your own and be sure to consider the use of free web design templates to save costs of building website.

(c) **Determining Keywords**: Doing keyword analysis to determine most effective primary and secondary keyword phrases with respect to search engine positioning, so that whenever somebody key in that keyword in any search engine they could easily find the company website.

(d) **Drafting the Content**: Producing the text content that will appear on each page. Revision of the rules for incorporating keyword phrases into page content and the specific concerns relative to writing for the internet before beginning.

(e) **Deciding Artistic Enhancement**: Planning the artistic aspects; graphics, animations and text appearances. Checking out the free web design templates on Psychology of colors, Font selection and

Performance considerations always give ideas on what is needed in our website or what is missing.

(2) **Bandwidth & Web Space Requirement** - Bandwidth allowance (a.k.a. web traffic) and host web space requirements (disk space) must be determined here before we can correctly select any hosting company. It is also necessary to determine what web development software will be used to create the site and whether or not it will require any special host accommodation; e.g. FrontPage2000 and Macromedia Flash produce websites that can only be hosted on specially equipped hosts.

Additionally, if company has decided upon a database driven website, we must here decide what your database requirements will be in terms of the actual database that will be created and the SQL scripting language that will be used to access it. Again, the host selected must accommodate these choices. It is also necessary to know the amount of web space, in megabytes of disk space that will be required from a host to house web site. This must be enough to accommodate web pages (.html files, graphics and multimedia files), any server side scripts that you might be using (CGI, Perl...), any server side database software, traffic logs and email accounts.

It is also necessary to know the amount of web traffic, in gigabytes per month that you will require from a host. This is based on the anticipated number of monthly page views; every page view increases the monthly running total by the pages' size.

As stated above, it is necessary to know whether or not web development software will require host side accommodation. E.g.

59

FrontPage2000 and Macromedia Flash produce websites that can only be accommodated by specially qualified web hosting services.

Additionally, if decided upon a database driven website, the host you select must be able to create for you an instance of this type of database (e.g. an empty MySQL database created in your own area for you to populate) and it must be able to process whatever SQL scripting language that you have decided to use in your web pages HTML to access the database (e.g. PHP).

(3)   **Domain Name Registration -** All web sites have an internet "address" in the form of either a DOMAIN NAME or SUB-DOMAIN NAME. FREE web sites usually limit you to a sub-domain name, however, some free website providers allow you to obtain your own fully registered domain name. Free hosted web sites generally require a fully registered domain name.

Fully registered domain names will generally run $15 - $35 per year (with a similar one time setup fee) depending on market prices. An example of a fully registered domain name would be "www.yourname.com". Sub-domain names cost nothing; your host will tell you what it is. An example of a sub-domain name would be "www.geocities.com/yourname/".

Here also comes the question, why should the company pay for a fully registered domain name if sub-domain names are provided for free by free host providers? The reason is that unless building a personal or hobbyist web site everyone wants fully registered domain name because one or more of the following reasons may be true:

(a) Company is required to go with a fee based host provider, because the FREE host providers cannot meet web site needs and fee based hosting services require fully registered domain names.

(b) Company wants people to be able to easily remember internet address (www.freehost.com/yourname/ is harder to remember than www.yourname.com).

(c) Search engine rankings are an important means of attracting traffic to website and search engines don't rank sub-domain named web sites reliably.

(4) **Web Hosting** - The vast majority of web sites today, from personal pages to small business e-commerce, rely on the shared web site hosting option. There are many FREE shared web hosting services available that may or may not meet needs. Typically, shared web hosts offer package plans that are an assortment of storage space, traffic allowances, server side software capabilities and management tools. This makes it imperative that you define your web hosting requirements BEFORE you begin the selection process.

Define Web Hosting Criteria: Disk space required, monthly traffic requirements, Software accommodation, Database accommodation, Traffic statistics tool and Control Panel. Selecting at least three or four hosts that satisfy defined requirements is always good. These sites will let you search for a list of hosts which meet these criteria. Notice that these searchable host databases all claim to perform the same service but don't always give the same results.

(5) **Website Development** - The method for making the web pages was chosen in Step 2. Basically, till now company should have decided to either use a

WYSIWYG editor like FrontPage 2000, or an HTML editor like 1stPage 2000. In this case the company has decided to hire a new person to do the website development and then take care of the computer system after the development and will pay development charges additional to the salary discussed.

(a) Learn how to use the web authoring software that company has selected, in this situation new employee is hired.

(b) Producing the web pages on computer.

There are two basic problems when it comes to dealing with browser compatibility issues: they're boring and they're complicated. But for designers, developers, and managers alike, it's essential to grasp these fundamental problems that we face when putting web pages on the Internet. Therefore before putting the site up and running it is essential that we check out that the website made is compatible with all the web browsers. The company has hired a new employee for the computer administration and therefore it becomes his duty to check out all the possibilities of error which may occur before or after the website development.

(6) Website Promotion - Web site promotion by way of proper search engine submission is essential for the web sites to attract more people to come and visit. It's an ongoing effort to get indexed and stay indexed. The company wants rankings to improve over time - the goal is to be within the top 30 search results in at least one of the major search engines for main keyword phrase, or not ranked at all, because if the company is rated below 30 the chances of people seeing the website are rare as people tend to go to the top most website which comes up after the keyword search is done.

There are many software and sites as well which help many people to submit their sites to different search engines at a time. At this point it becomes the administrator's responsibility to keep the website up-to-date and well into the top rankings of the search engine to make sure that more and more people are attracted towards the company's website.

(7) Website Maintenance – Last step but not the least, making and selling is one thing but keeping up the good work is always an uphill struggle. That's also the same with the website maintenance, people will prefer to go to the sites which have information updated on a regular basis such as weekly or monthly, so that they find something new whenever they go and visit. Main tasks would be Tracking Search Engine Rankings, Link Validation to see that there is no invalid links in the website, Testing Site's Performance to see that visitors doesn't have to wait for long time just to open one page.

5.3 Data Structure for Database records

The data structure for database will be as the following:

Customer Record	=	Customer Number
		First Name
		Last Name
		Address
		Telephone
		Email
Address	=	Number
		Street
		Road
		District

		State
		Zip Code
		Country
Telephone	=	Country Code
		Area Code
		Telephone Number
Invoice Record	=	Invoice Number
		Total Cash Received
Product Record	=	Product Code
		Product Name
		Product Description
		Product Bought Price
		Product Sale Price
		Product Bought Date
		Customer Number
		Salesperson Number
		Invoice Number
Product Category	=	Category Code
		Category Name
Salesperson Record	=	Salesperson Number
		Name
		Address
		Telephone
Product Owner Record	=	Product Code
		Product Name

		Customer Number
		Customer First Name
		Customer Last Name
Total Cash Received	=	Invoice Number
		Date
		Payment Method
		Amount Charged
Exchange Good Record	=	Exchange Number
		Product Code
		Date
		Customer First Name
		Customer Last Name
		Exchange or Refund

The database design will be include Appendix B to give a look how our database will be build and how dose it will serve our project needs from connecting the different departments and branches.

5.4   Web Development Process
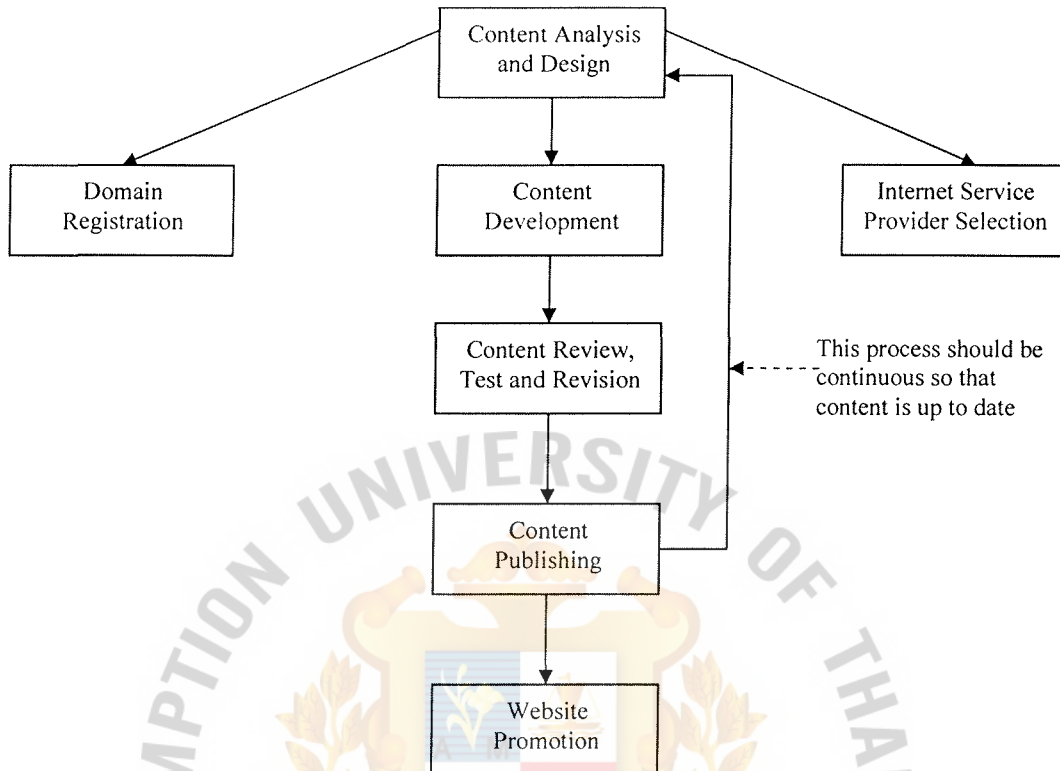
Figure 5.3.   Web Development Process Diagram.

5.5   Web Strategy for Achieving Objective

The key success factors for a website design strategy can be summarized in SIX Cs, as mentioned by K. Johnson, Internet Marketing Strategy: Implementation and Practice, 2000.

(a)   Capture: there are millions of websites in the Internet mesh and it is highly unlikely that someone may visit some site by chance, therefore designer must promote website timely and efficiently.

(b)   Content: the content is always the key to any website. If the content is not good then it would not attract anyone to the website. If visitors recognize value then they will visit again and use the services provided. Interactive

66

content, catalog and personalization to every visitor can assist in generating more visitors and customers.

(c) Community: if website developer can tie together the specialized web communities to the website, then it could also generate great value in repeat visits to the site.

(d) Commerce: all the contents on website should be designed in a way that it generates additional sales directly or indirectly.

(e) Customer orientation: in accordance with the mantra of many marketing researchers and authors, customer orientation is the key to all the business and should be the key in the website design as well. To help customers find the information they need, content should be concise and informative.

(f) Credibility: since Internet is the medium and there are likely to be many competitors, therefore it is important to use the medium to establish that company is reliable and trustworthy. This always attracts more customers to do repeat purchases.

5.6 Finding Customers

How to find customers is a big question and where are they we don't know. Still it is much cheaper promoting through Internet than promoting your products in newspapers, magazines or billboards. Most of these will cost a lot and could sometimes eat up all the profits gained form the sales.

Our company already has a database of its old customers and could send emails to the ones who already have email address, for everyone that could possibly be interested in our new site. Some customers may have email addresses but it's so new they haven't added it to their cards. Inquire and ask for the email address, add it to your records. You

never know that old customers may now be interested in the wares that company has to offer to them and they come back and buy more.

Another way is to put the website address into the search engines. There are several ways to get the search engines to work for you. One is to engage a company, that for a fee, submits your site to hundreds of search engines. The fees range from $25.00 to hundreds of dollars, depending on who is doing it and how many search engines to which they submit your site information.

Submitting to search engines is not a one-time thing that you do and then forget. It needs to be done periodically, about once a month to be sure that the information is fresh. But the good news is that you don't need to go to every individual search engine address to submit your site. There are many sites which could do this for you such as www.addme.com

This site goes to many individual search engines, usually with free listings. There is however some where you are asked to pay a fee and you decide if you want to do this when those screens show. There are many free search engines so it's a business decision if you choose to pay for some of them. These submissions must also be done periodically. There are several other good submission sites also; some which may even advertise by email you have received.

Other good places to advertise your site are product-specific bulletin boards, discussion forums on other specialty sites and Usenet newsgroups. Do not just advertise there. Contribute to the discussions with helpful replies to inquiries. Always include your URL link and name of your site under your signature. Plus, you make a new contact every time you are helpful. You may never hear from that particular person but hundreds of other readers saw your post. You will never know how many you actually reached but you can rest assured that your message was seen and remembered.

One of the most important benefits of networking is the exchange of links between sites. Your site linked to as many other sites with similar products or interests is paramount. Do not let up on your promotion of your site. As soon as you do that, you lose visitors and therefore potential customers. Keep up the advertising on a regular basis in the avenues you have chosen.

Thousands of new readers arrive on the Internet daily. They have not seen company's posted messages of several months ago. How are they to find you if you don't show yourself again. Administrator must be diligent and should keep up the never stopping promotion, because that'll be the end of site if the promotion is finished. Work should be done on both the site and promotion continuously. Business will be there, sometimes lots, sometimes not. But it will grow steadily if we adhere to a program of updates and promotion, just a little bit of time is needed and everything needs time though.

5.7 Appearance and Condition

In real estate, the mantra is Location, Location and Location. But in the education business it's all about quality and price. How do we rate service quality? *Mint, Excellent, Fine, Very Good, Good, Fair, Poor*?

There are almost as many ways of looking at quality as there are students or people who want to learn. And there are variations in how we grow and mature in demand. The course that looked *Excellent* to us before may not be much better than *Good* today as we continue to educate our own mind and refine our knowledge.

Beginners often overlook quality in their excitement of having located particularly interesting or potentially valuable service and course. They may have read about certain names or signatures in value guides and therefore assume that a name alone means high value. Serious students, however, try to get more information about our product and

service before they invest or apply to join our courses and potentially appreciating service. Over here it's the company's job to make sure that they have the best available products in the market and can make its customers satisfied in all the fields that they may think is a grey area; such as helping the students how to use our materials and how to get the advantage from it and provide them with the best service and new tips and tricks and inform them with the new products and services. Moreover, the students will be qualified to enter the exam to get a job or task and he/she will get a certificate. These kinds of things normally effects the business a lot because providing goods and services of high quality is what everyone prefers to buy and also not from somebody who doesn't know how these things should be used for.

Company must look from the point of view of the customers and what they would prefer to buy or learn rather than just making something and then saying here it is and do you want to buy or join our course. This kind of selling doesn't work anymore as each and everyday people are becoming more and more conscious about how good a quality of product it is rather than believing on someone else's description.

5.8   Order Handling and Customer Relations

New website with products and service, here comes your first sale! Very first response to an order is very important. It sets the tone for how you are viewed by your customers, their important first impression of how you handle transactions. Therefore we need to make sure that your acknowledgment, or order confirmation letter, has all the right ingredients in it and clearly states how a transaction with your new site will proceed.

How do we know what should be in an order acknowledgment? It's as easy as it gets we can just ask ourselves what we expect to be told when we order something.

Such as, What did I order?, What is my total?, How do I pay for it?, When can I expect to receive it?, How can I send it back if I don't like it?

After the customer has ordered something from the site there should be confirmation email going out from the company as well stating all the details, so that the customer has a record to look at what actually he ordered and what are the niceties. For example, description of the order, total price, sales tax and shipping charge if applicable, a total order amount. Payment options used by the customer, and also including shipping procedure details in each option with an approximate time frame for shipping. Last, but the most important, is the referring to the site guarantee and return policy with specific time limits for notification and receipt of returns and then thanking the customer for doing the shopping with the company.

So that customer is aware of what he has to do in case he receives damaged goods or not the same as ordered. The secret to a smooth transaction over the Internet is that nothing is left up to assumptions or guesses. If we have spelled it out, it should be clear. If we leave even minor details up to the imagination, everyone will use theirs which may not necessarily correspond with what we envisioned.

In the online learning, we should ask the student his internet connection speed to be sure he/ she will get the best audio and video conferencing quality.

The Internet can network information in a thousand-and-one wondrous ways, more than we dreamed were possible. It can not do one thing though: Beam a physical object magically to our doorstep. When doing business involving physical objects on the Internet we must therefore rely on shipping companies to transport our wares to customers.

Shipping is a very important part of your website business. How company ships shows what type of company and person you are to your customer who only saw your

71

lovely web site but doesn't know what else to expect. Company has to make sure the way we ship does not disappoint the customers. Everything must be done professionally; it pays in the long run. Not only is customer impressed with the care taken to ship the product he or she has paid in advance, but company can be certain that repeat business will come your way when you have demonstrated how carefully you ship.

What do the customers do when something they can't use or is not what they expected? Well they should contact us and we will be with them step by step to tell them how to use it or bring them back to the center for a refund or exchange, of course. This practice is so universal today that we don't even think twice about it. We expect the web center to extend this courtesy. Most reputable centers do, with very few exceptions.

Mr. John Wanamaker may be universally known for having invited young Henry Ford to sell his modest automobile from the Wanamaker store at a time when the American car manufacturers actively boycotted it everywhere in the U.S. Wanamaker's was the first dealership that launched the Model T Ford, the car that would change the auto industry and its customers forever.

But for retailers throughout the world, John Wanamaker's name has become synonymous with customer satisfaction as he is the first documented merchant to allow a customer to bring back for refund merchandise that did not suit. Return policies are now in effect in stores everywhere, but what about mail order purchases over the Internet? Can they be sent back?

Most web catalog centers permit returns and refunds as they agree with Wanamaker's assessment that a good customer is worth keeping. And that no customer is good if he or she does not come back. Therefore having a return policy is always of

benefit and not of loss. Therefore a first purchase should never be the last purchase and a generous return policy ensures that it is not.

A good return policy is a web catalog site's first guarantee that every customer will want to be what John Wanamaker noted: "A good customer (that) is worth keeping".

VI. PROJECT IMPLEMENTATION

6.1 Overview of Project Implementation

The project plan could be divided into four stages.

Firstly, to analyze the existing system, in order to spot out the pros and cons of the system. Secondly, define the problems for developing matters of the new system. Thirdly, to gather all the information analyzed and then designing the new system. Lastly, to setup the prototype of the project, in order to do trial and error for the completion and perfection of the new system implementation.

In the beginning it's always possible that the system may have some loop holes, which can only be rectified and changed after testing the system. Sometimes these small points may lead to major risks to the company and its information if not corrected, because information is the key in today's world.

6.2 Test Plan

After the completion of the project, the working group and sample test must be set up and selected. Test planning must be assigned to the working group; objective of this is to ensure that new system, blending with existing system will be used perfectly and efficiently to gain more advantages of the new system. Such as testing that website will not crash down while someone is using and no unexpected errors will occur. During the test plan, in case any mistake or any cracks are found in the system those points still can be rectified before putting the system online and available for the whole community in case of website and database system for the staff members of the company.

Signing off by management is required at this stage of implementation. The major concerns are defined as below:

(1) System testing to ensure that all programs which make up the new system work properly together.

(2) Module testing to make sure that each and every module that makes up the programs work suitably.

(3) Testing and debugging the website and individual program must be completed during the website development and programming task by the development team. Testing concentrates on the website and programs itself in an attempt to make sure that each program works correctly.

(4) Testing the links to see the upstream and downstream associations between the server and different programs modules.

VII. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

It can be concluded that the Internet is a valuable complement to a company's traditional marketing strategy and the firms that establish an effective Internet presence at an early stage have a distinct advantage over their competitors.

From the business point of view it is said that there is "no one best way" or "one right way" to perform any action but there is "best way" to do the same job or action. It is also same with the Internet selling. The primary consideration is finding a sales system that fits the company's goods and selling goals and objectives.

The main objective of the Programmer Software Help Center is to open up a business in another area and this is achieved by developing the company's website to use the web front as the means of opening up a center. It is risky for a company who sells non well-known products in comparison with Amazon.com, Internet.com and Informit.com. Therefore cost and benefit analysis was done to see whether it is feasible to open up the web center or not.

From the cost and benefit analysis we could see that it is feasible to develop a website and use it as another selling medium. We see that the Payback period is within 7 months after the full development is done, which is quite good for any new system. We can also see that the company will start making profits after about 1 year and 1 month. This is also good, because from the company's information we know that they didn't make any profit for the first 3 years when they opened up a branch in Jordan.

Therefore we can be confident enough to say that investment in the Internet center front for company promotion and sales is worth more than the investment in the opening of physical center. From the estimated figures we could see that the cost is

76

lesser than physical system and therefore we can expect to decrease more costs in the future as well. Even if this project cannot decrease further costs, at least it will meet the marketing and promotion goals and attract more customers and bring the company's name and products more knowable within the world wide community through the one big Internet medium at lower costs.

This project presents and confirms positive future of the Internet website of the company by the raw data and estimated figures. This project also presents the wide variety of options to be offered through selling online.

New database system has followed the objectives of the company and created the system with predefined steps. Firstly, the new system has studied the existing system to identify the new development system in every transaction of the existing system. Secondly, analyses of the existing system were done in order to know the real situation of the system to design the new system. The new database system eliminates a lot of lengthy jobs to smaller and easy procedure.

Table 7.1. Degree of Achievement of the Proposed Database System.

Process	Existing System	Proposed System
Add New Product	25 min.	2 min.
Add New Customer	15 min.	2 min.
Purchase	30 min.	5 min.
Summary of Cash Received	25 min.	3 min.
Product Report	90 min.	8 min.
Return Item	20 min.	2 min.
Verify Service Item	25 min.	2 min.
Total Time Consumed	230 min.	24 min.

7.2 Recommendations

Since this system is a delicate project to solve the problem of opening the physical center in another area and problems which occurs from the manual handling of the current system, this also includes the management system to help the managers in the decision making. The website development and the making of the database central and computerized will solve a lot of problems but it's not the whole picture of any organization. There are a lot of aspects which should be considered and developed.

Programmer Software Help Center could consider other supporting systems, which could be the integrated accounting system for the whole organization than just having different systems at each of the branches. This will also fulfill the requirements of the central management to see the whole picture of the company.

Local vendors can also open up an online center to become multi-channel players in the Internet, which consists of whole world. It is not easy but still Internet cake is quite big and many more people could take a piece out of it. Customers' relations will no longer be buying and selling, but more onto customer satisfaction. Online strategy should focus on developing long-term strategies that create new revenue opportunities.

To conclude we could say that the system should develop links with the other systems in the future to share more information with each other and departments and also bring in the new technology to be applied to get higher performance in the near future. Internet made the world a small room but this isn't it, if we don't take advantage of it, somebody else will and the world will still be bigger for us.

APPENDIX A

WEB INTERFACE DESIGN
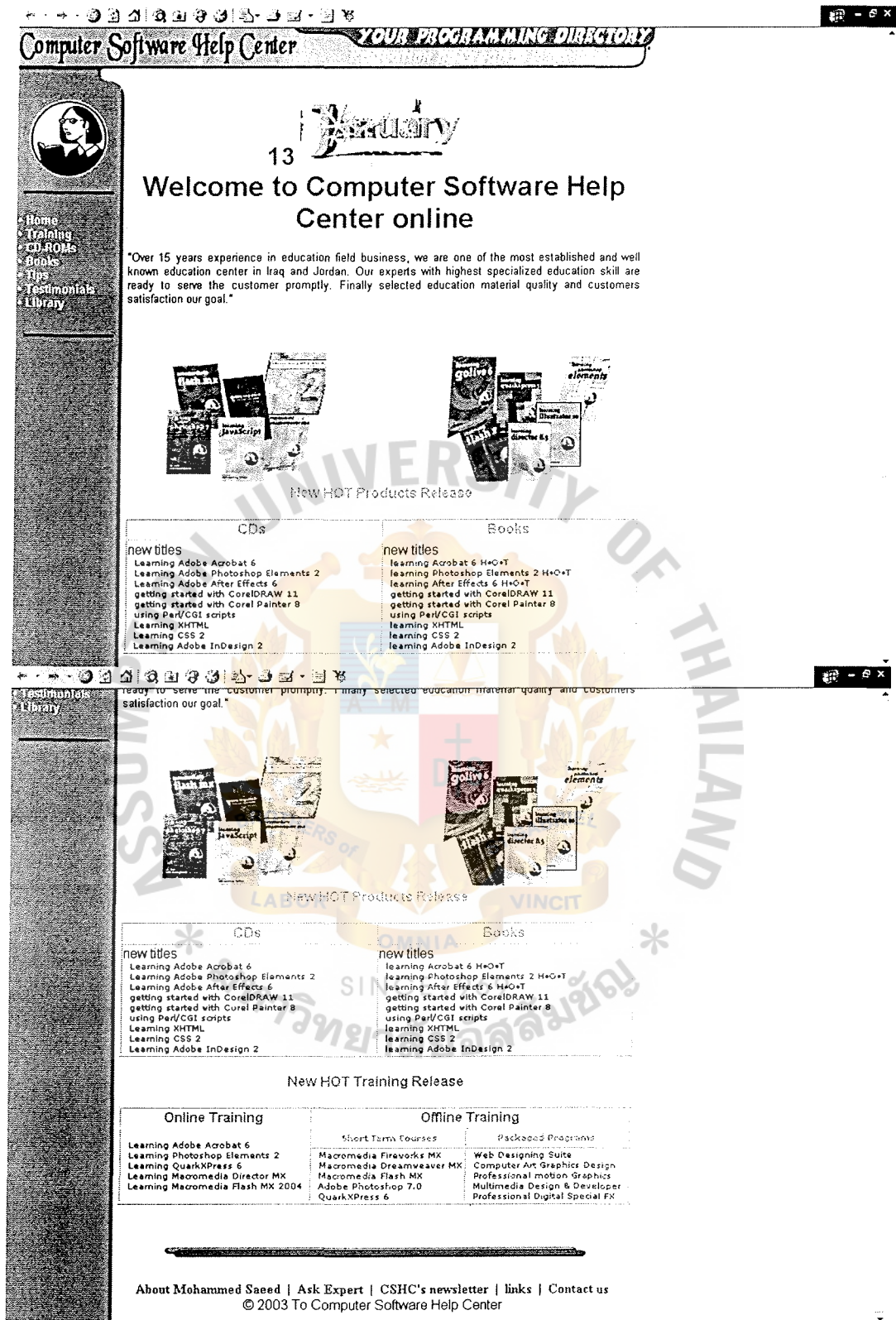
Figure A.1.   Home Page.

Training

New HOT Training Release

Online Training

Learning Adobe Acrobat 6
Learning Adobe Photoshop Elements 2
Learning QuarkXPress 6
Learning Macromedia Director MX
Learning Macromedia Flash MX 2004

Offline Training

Short Term Courses	Packaged Programs
Macromedia Fireworks MX	Web Designing Suite
Macromedia Dreamweaver MX	Computer Art Graphics Design
Macromedia Flash MX	Professional motion Graphics
Adobe Photoshop 7.0	Multimedia Design & Developer
QuarkXPress 6	Professional Digital Special FX

Subscriber Login

username:

password:

LOGIN

About Mohammed Saeed | Ask Expert | CSHC's newsletter | links | Contact us
© 2003 To Computer Software Help Center

Figure A.2.   Training Center.

Computer Software Help Center **YOUR PROGRAMMING DIRECTORY**

Offline Training

you can join our offline training courses by contacting our physical center
click here

- Home
- Training
- CD-ROMs
- Books
- Tips
- Testimonials
- Library

Short Term Courses

☐ Macromedia Fireworks MX   ☐ Macromedia Dreamweaver MX   ☐ Macromedia Flash MX

Date: 2nd march.   Date: 2nd march.   Date: 9th march.

Duration: 16 Hours.   Duration: 16 Hours.   Duration: 12 Hours.

Price: 15$ Price: 20$ Price: 25$

☐ Adobe Photoshop 7.0   ☐ QuarkXPress 6

Date: 9th march.   Date: 15th march.

Duration: 15 Hours.   Duration: 12 Hours.   [Apply Now]

Price: 20$ Price: 20$

Packaged Programs

☐ Web Designing Suite   ☐ Computer Art Graphics Design   ☐ Professional motion Graphics

Application: Macromedia Fireworks MX, Macromedia Dreamweaver MX, Macromedia Flash MX Basic, HTML, WS FTP.

Application: Adobe Photoshop 7.0, Adobe PageMaker 6.5, Adobe InDesign 2.0, and Adobe Illustrator 10.0.

Application: Macromedia Flash MX-Basic & Intermediate Level.

Outcome: You will fill in position like Web Designer, Web Master in Advertisement Agencies, Web Publishing Firms, E-Commerce Developer Centers, ISP and other Web Application and Servicing Companies.

Outcome: Candidate will fill position like Graphic Designer, Creative Artist, Designer, and Digital Designer in Advertisement Agencies, Publishing Houses, and Pre-Press Solution Providers ... etc

Outcome: Candidate will be able to develop independently Web Banners, Simple 2D Animations for the Web, Interactive Presentation, and Tiling for Internet Service Providers, Web Hosting & Web Marketing Firms, and for Corporate Companies with E-Com Business model.

Figure A.3. Offline Training.

Learning Adobe Acrobat 6 online

Learning Adobe Acrobat 6 is a movie-based tutorial for people who want to quickly get up to speed with Adobe Acrobat. Covering both Acrobat 6 Standard and Professional, these hands-on exercises teach you how to take your PDFs to the next level by adding interactivity such as links, bookmarks, and form fields. You'll also learn how to use Acrobat for commenting on documents in a group review scenario, and how to create dynamic PDF presentations by embedding multimedia items like sound and video. By following along with this tutorial, you'll master key features of Acrobat 6 Standard and Professional in no time.

Home
Training
CD-ROMs
Books
Tips
Testimonials
Library

Starting Out	Time Schedule
Introduction	
::welcome	16:23 (10.5 MB)
Interface	
::interface	15:49 (30.6 MB)
::zoom tools	13:19 (26.1 MB)
Working with Links	
::using links	3:38 (4 MB)
::creating links	7:12 (9.6 MB)
::destination links	5:30 (6.1 MB)
::editing links	4:10 (8 MB)
::cross-document linking	6:25 (7.9 MB)
::web links	9:08 (16.6 MB)
Working with Articles	
::reading articles	5:34 (5 MB)
::creating articles	6:51 (9 MB)
::editing articles	3:40 (5.7 MB)
::article magnification settings	2:29 (3.6 MB)
Working with Bookmarks	
::creating bookmarks	3:41 (4.1 MB)
::bookmarking elements	6:40 (9.2 MB)
::nesting bookmarks	3:45 (6.2 MB)
::quick bookmark names	2:18 (3.1 MB)

Figure A.4.   Online Training.

82
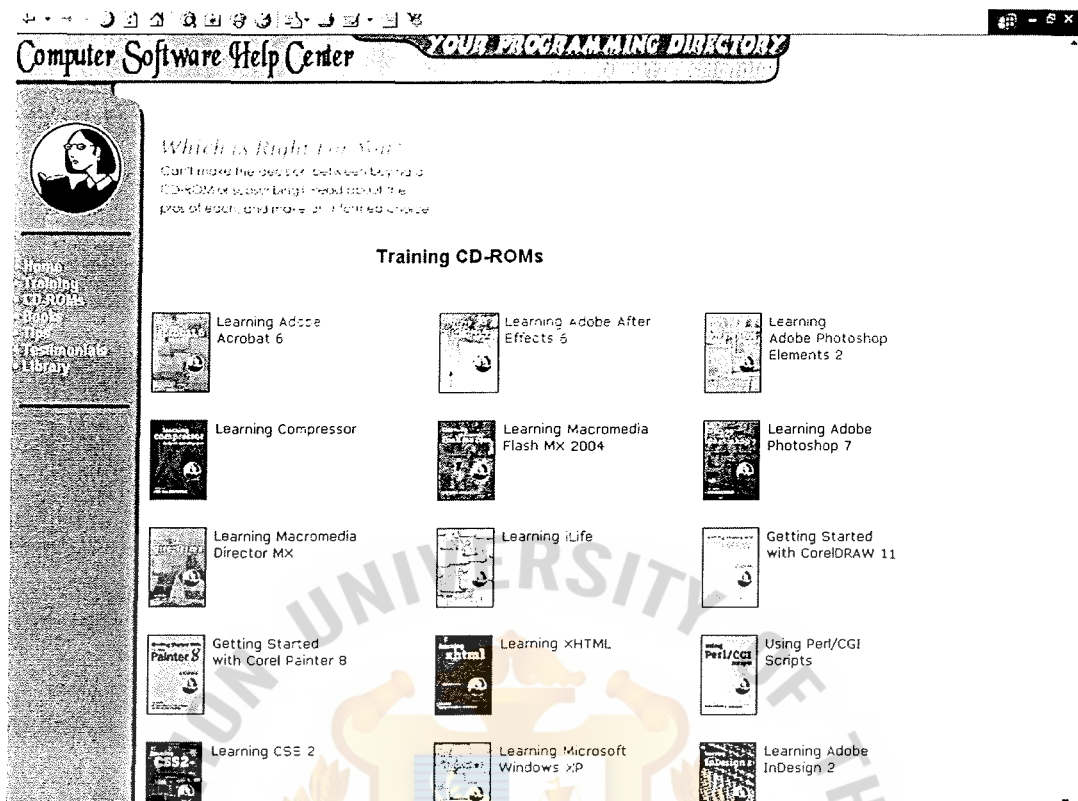
Figure A.5. CDs Page.

Figure A.6. Books Page.
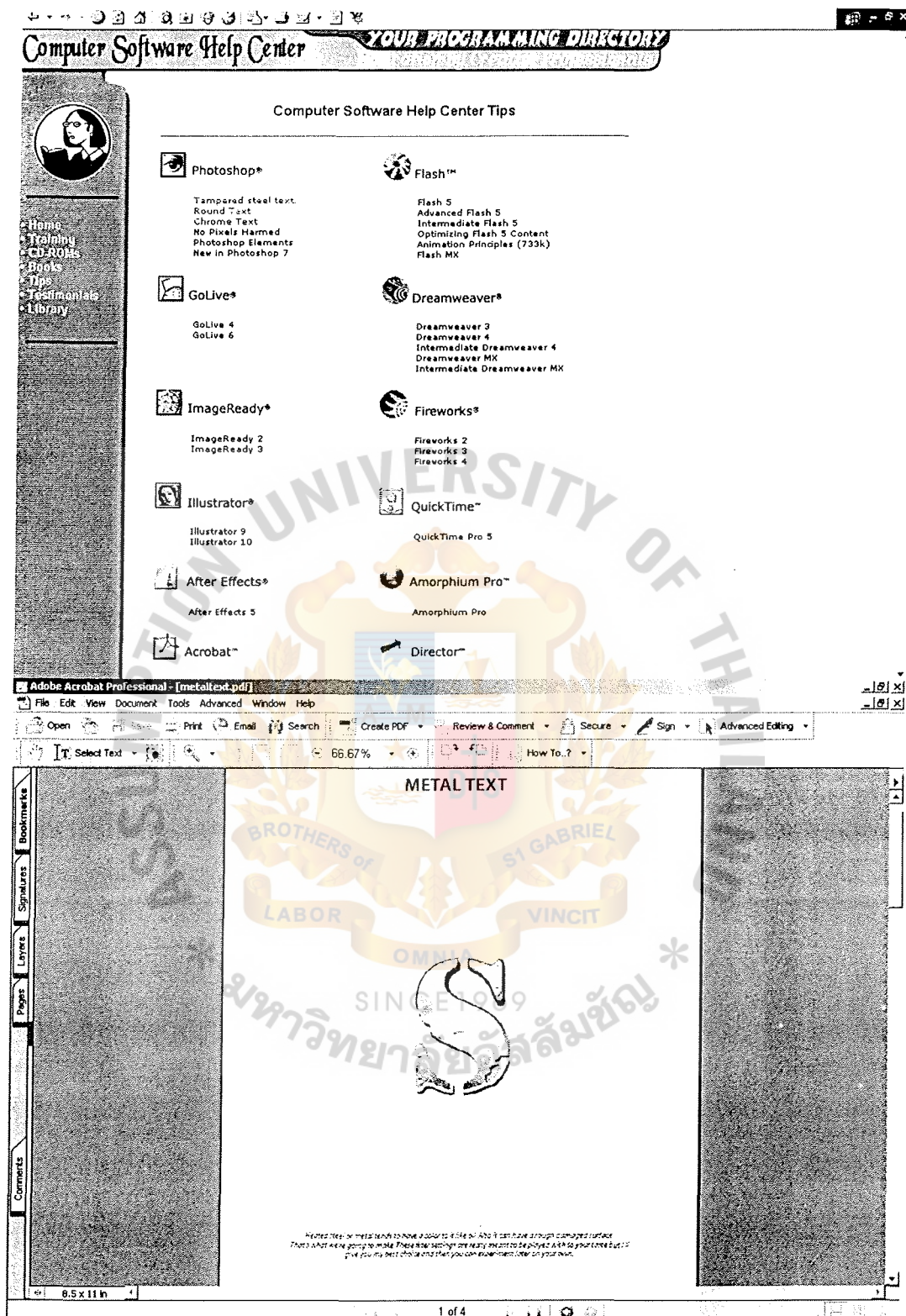
Figure A.7. Tips Page.
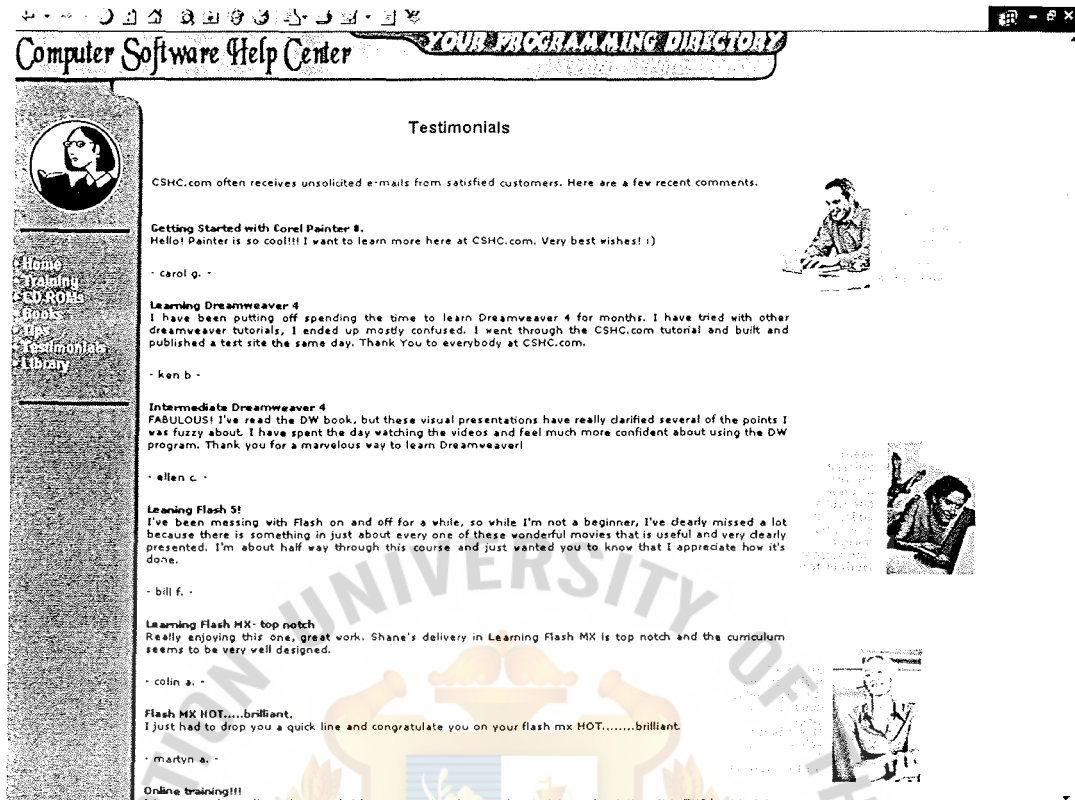
Figure A.8. Testimonial Page.

Computer Software Help Center | *YOUR PROGRAMMING DIRECTORY*

Movie Library

3 ways to subscribe

monthly

annual

premium

Subscriber Login

username:

password:

LOGIN

Browse all titles

Gain access to CSHC comple entire CD-ROM trakning movie library online, 24 hours a day, 7 days a week!

LATEST RELEASES

::Learning QuarkXPress 6
::Learning Adobe Acrobat 6
::Learning Macromedia Director MX
::Learning Macromedia Flash MX 2004
::Learning Compressor: For Movie and Audio
Compression ::Learning XHTML

::Learning Adobe Photoshop 7
::Learning Adobe Photoshop Elements 2
::Introducing Xcelsius
::Learning iLife: iTunes, iPhoto, iMovie and iDVD
::Getting Started with CorelDRAW 11
::Getting Started with Corel Painter 8
::Using Perl/CGI Scripts

use the CSHC.com learning site.

If you are connecting to the internet using a slower connection you can still view our movies, they will just take longer to download. Tip: If you wait until the entire movie downloads,which is visible when the play bar at the bottom of the movie turns dark, you can watch it without hiccups or interruptions. Be sure to view some free demo movies to check to see if you're happy with the speed and performance before you subscribe.

Macintosh

250Mhz or better Power PC

32 MB Ram

800x600 screen resolution

Figure A.9. Sample Movie Library Page.

Computer Software Help Center   *YOUR PROGRAMMING DIRECTORY*

About Computer Software Help Center

our mission : Helping programmers, media designers & communicators understand how to use professional tools and design to enhance visual communication through web, print, and motion graphics.

Mohammed Saeed he is the founder and manager of the computer software help center.

About Mohammed Saeed:

He is currently an Associate Professor at the department of Computer Science, Faculty of Computers and Information.

- Home
- Training
- CD-ROMS
- Books
- Tips
- Testimonials
- Library

Current Researches

1. Arabic Language Processing.
2. Machine Translations.
3. Expert Systems
4. Agent-based Systems.
5. Item Banking.
6. Distance Learning.
7. Object-oriented programming.
8. Concurrent Constraint Languages.
9. Multimedia Information Systems.

Publications

Papers Published In Refereed Journals

1. Shafic S., Mohammed Saeed, Rafea A. Macro Association Rule Discovery: Impact of Environmental Indicators Changes on Life Assurance Business, *Jordanian Informatics Journal* , Faculty of Computers & Information, Jordan University, 2002.
2. Mohammed Saeed, Riad M., Amer A., Baraka H., Speculative Work in Neural Network Forecasting: An application to Jordanian Cotton Production, *The Jordanian Computer Journal*, ISSR, Jordan Univ., Vol. 27(1), pp. 58-79, 1999.
3. Mohammed Saeed, Rafea M., and Rafea A., KROL: A Knowledge Representation Object Language on Top of Prolog, Expert Systems with Applications: An International Journal, Vol. (15) pp. 33–46, Elsevier *Science Ltd.*, 1998.
4. El-Korany A., Mohammed Saeed., Baraka H., Rafea A., An Approach for Automating the

Figure A.10.   About us Page.

Ask Our Expert

Click Hear if you want to ask our expert

Subject	Poster	Views	Replies	Rating	Last post
WANTED. CD Cover Designer	**DONOTDELETE**	28	4		12/29/03 10:26 AM by Anonymous
ASTROLOGY CANCER 69 SYMBOL	Anonymous	11	0		12/25/03 10:10 PM by Anonymous
MERMAIDS!	Anonymous	21	1		12/13/03 03:04 PM by Anonymous
Hi!	Sherry2468	25	21	☆	12/09/03 11:29 PM by Anonymous
Wanted. Anyone who can answer my question	deevious1	28	1		12/09/03 04:27 AM by Pootiecat
"Stranger" Thought	Koreen	36	11		11/29/03 05:26 AM by dltaylor
NEW CHRISTMAS LINKABLE GIFS	LadyJoJo	18	0		11/24/03 11:31 PM by LadyJoJo
bibi	koeiekat	9	2		11/19/03 12:43 PM by Pootiecat
page of pretty pictures	LadyJoJo	21	1		11/18/03 09:28 AM by Anonymous
A STARTER website I've made...	I'm TOO stylish	165	4		11/16/03 08:03 AM by Shadow_Kiss

Ask Our Expert

Username
your name

Subject
your subject

Post Icon

Post

Instant Graemlins

Instant Code

URL	Email	Image
List Start	List Item	List End
Poll Start	Poll Option	Poll Stop
Bold	Italics	Quote
	Code	

Font color

Continue

Figure A.11.   Ask Our Expert.

Computer Software Help Center — *YOUR PROGRAMMING DIRECTORY*

- Home
- Training
- CD-ROMs
- Books
- Tips
- Testimonials
- Library

Free CSHC.com newsletter

We are always working hard on new projects. If you would like to be notified as new books are released, or of book signings and seminars I offer, sign up here. I also offer tips and industry news in each newsletter. Sometimes, my subscribers even get special product discounts....
We will never sell or share your email address with other companies.

Join our mailing list for new and updated information!

[_____] email address

( ) subscribe
( ) unsubscribe

[Submit]

CSHC's Current Newsletter

We've been busily developing and launching a number of new educational products over the past month. Here's the latest news from CSHC.com.

NEWSLETTER CONTENTS

-- NEW CD & ONLINE TITLE : Photorealism with Khalil Shihab: using Adobe Photoshop and Illustrator
-- NEW CD & ONLINE TITLE : Learning Adobe Acrobat 6
-- BUNDLE UP & SAVE : Adobe Print Design Bundle
-- BUNDLE UP & SAVE : Adobe Web Bundle
-- BUNDLE UP & SAVE : Web Scripting Bundle
-- NEW HOT BOOK : Adobe After Effects 6
-- NEW HOT BOOK : Adobe Acrobat 6
-- UPCOMING HOT BOOKS : Through Q1 2004
-- FLASHFORWARD2004 : March 3 - 5, 2004 in San Francisco, CA
-- SHOW YOUR STUFF: Nominate a site for the Flash(TM) Film Festival

Figure A.12.   CSHC Newsletter.

Cshc.com Links

These links relate to Web design, Web graphics, and Web authoring tools.

PRODUCT SPECIFIC

GoLive Heaven A source for up-to-date GoLive news, support, and plug-ins.

Russell Brown's homepage A veritable plethora of quality photoshop tips & techniques.

Studio Seven Design Offers a nice collection of Dreamweaver tutorials and step-by-step examples.

Dreamweaver Depot An amazing resource for everything Dreamweaver related.

Yaromat Offers a multitude of Dreamweaver files for additional extensibility.

Moock.org Wonderful source for Flash™. He offers free, downloadable Flash™ .fla's, step-by-step tutorials, and even workflow suggestions. A "must visit" for any Flash™ developer.

Flash Kit Another great Flash resource with tons of free how-to's and downloadable examples that you can deconstruct.

STOCK PHOTOGRAPHY

- Home
- Training
- CD-ROMs
- Books
- Tips
- Testimonials
- Library

Figure A.13.   Links Page.

91

Computer Software Help Center — *YOUR PROGRAMMING DIRECTORY*

- Home
- Training
- CD-ROMs
- Books
- Tips
- Testimonials
- Library

contacting us

To contact Computer Software Help Center, please use the form below. We will make every attempt to answer your inquiry as quickly as possible.

You can reach us by mail:

CHSC.com
P.O. Box 6024
Amman, Jordan 3027

You can also reach CSHC.com at the following numbers:

Customer Service Hours: 9:00-5:00 PST

Internationally: +962 646 7076
Fax: +962 640 9607

To what department should your inquiry be directed?
- Sales, if you have questions about ordering.
- Customer Service, if you have already ordered from us.
- Shipping, if you have any shipping-related questions.
- Webmaster/CGI, if you have any questions/problems regarding the store/Web site.
- Other

What is this inquiry regarding?

[Please select ▼]

message

If you would like us to get into contact with you, please provide us with your email address. It will

[Please select ▼]

message

If you would like us to get into contact with you, please provide us with your email address. It will not be given to any other company, nor will it be placed onto any sort of mailing list or spammed. We don't do that.
* Indicates a required field

First Name: * [   ]

Last Name: * [   ]

Email Address: * [   ]

Please enter your message to CSHC.com below: *

[   ]

[Submit Message]

Figure A.14.   Contact us page.

92

Stage 1 of 2: Enter your information

First Name *
Last Name *
Company
Phone # *
Email *

Billing address

- A physical address is required for all shipments.
- We cannot ship to a Post Office box.
- Your billing address must match exactly with the billing address that is on record with the credit card company.

Use separate shipping address   ○ Yes ○ No

Address Line 1 *
Address Line 2
City *
State (USA)   Select a state
State/Province (not in USA)
Zip/Postal Code *
Country *   UNITED STATES

Promotion Code (optional)
Comments (optional)

Computer Software Help Center   YOUR PROGRAMMING DIRECTORY

Stage 2 of 2 - *Enter credit card information*

Please Note:

CSHC.com has initiated AVS (Address Verification System) to help protect you against Credit Card Fraud. All orders being processed will now require the billing address to match the credit card billing address. If your bank does not support AVS or if you receive an error message please call +962-335-9632 Ext. "0" to complete your transaction by phone. We will be happy to assist you!

Please enter your credit card information below.

VISA

Card Type Visa
CC Number: (no dashes (-) please)
CC Expires: January / 2003

Security Code
Submit

About Mohammed Saeed | Ask Expert | CSHC's newsletter | links | Contact us
© 2003 To Computer Software Help Center

Figure A.15. Online Payment.

93

Benefits of CD-ROM Training

* No internet connection required - faster access to movies
* Includes tutorial files so you can work along with the instructor
* Higher quality movies and sound
* You can take the cd with you when you travel or work without internet connection

Benefits of Online Learning

* View over 1000 movies on dozens of topics at any time - 24/7
* Updates to titles happen faster online - we don't have to manufacture a disc or cover artwork.

Benefits of both subscribing and purchasing cds!

Even if you decide to purchase CD-ROM training, you might consider subscribing to our online learning catalog. This gives you the best of all worlds - you can get that question answered in the middle of the night, decide if you want to learn a new application, or watch a full tutorial on the CD-ROM and study along at your own pace using the tutorial files.

Ask Expert | Sitemap | CSHC's newsletter | links | Contact us
© 2003 To Computer Software Help Center

Figure A.16.   Benefits to buy CDs.

94

Subscription Signup: 1 of 3 - *Install Quicktime 6*

Step 1:

Before signing up be sure that you have QuickTime 6 installed. It is required to be able to view our online content. Click on the "Install QuickTime" link below to get the latest version of QuickTime.

Download and Install QuickTime

Get
QuickTime

Step 2:

If you are connecting to the internet using a slower connection you can still view our movies, they will just take longer to download. Be sure to view some free demo movies to check to see if you're happy with the speed and performance before you subscribe.

Step 3:   For new subscribers: Click Here to Signup Now

About Mohammed Saeed | Ask Expert | CSHC's newsletter | links | Contact us
© 2003 To Computer Software Help Center

Subscription Signup: 2 of 3 - *Enter billing and login information*

CSHC.com has initiated AVS (Address Verification System) to help protect you against Credit Card Fraud. All orders being processed require the billing address to match the credit card billing address. if you have any trouble please call +962-335-9632 Ext. "0" to complete your transaction by phone. We will be happy to assist you!

With your memberships, you will be automatically billed each month. Your billing cycle is the numeric calendar day that you signup. To cancel your subscription go to "Contact Us" and send us email with your Un subscription request.

Subscription Type:
- Monthly: $25 per month (no minimum)
- Annual: $250 per year (20% off - less than $21.00 per month)
- Premium: $375 per year (an annual subscription - includes exercise files!)

First Name: [
Last Name: [
Address Line 1: [
Address Line 2: [
City: [
State: [
Zip: [
Country: [
Phone: [

Your email address is the username that you use when you login to the online training library.

Email: [
Password: [
□ I have read and agree to the

Figure A.17.   Joining Movie Library Page.

CSHC.com Online Training Movie Library Terms and Conditions of Use

THE CSHC.COM ONLINE TRAINING MOVIE LIBRARY WEB SITE IS INTENDED FOR USE ONLY FOR LAWFUL PURPOSES. BY SUBSCRIBING TO THIS SERVICE, YOU AGREE THAT YOU HAVE READ, UNDERSTAND AND AGREE TO THESE TERMS AND CONDITIONS OF USE. YOU ALSO AGREE TO REVIEW THIS AGREEMENT PERIODICALLY IN ORDER TO BE AWARE OF MODIFICATIONS TO THE AGREEMENT, WHICH MODIFICATIONS CSHC.COM MAY MAKE FROM TIME-TO-TIME AND AT ANY TIME. YOUR CONTINUED ACCESS TO OR USE OF THIS SITE WILL BE DEEMED YOUR CONCLUSIVE ACCEPTANCE OF ANY MODIFIED AGREEMENT.

YOU ARE CONSENTING TO BE BOUND BY AND ARE BECOMING A PARTY TO THIS AGREEMENT, THE TERMS AND CONDITIONS OF WHICH SHALL PREVAIL IN GOVERNING YOUR RIGHTS OF USE. BY CLICKING THE "SUBSCRIBE HERE" BUTTON, YOU ARE CONSENTING TO BE BOUND BY AND ARE BECOMING A PARTY TO THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, YOU MUST NOT SELECT THE BUTTON INDICATING "SUBSCRIBE HERE" AND YOU MUST NOT INSTALL OR USE THE SOFTWARE.

1. DEFINITIONS
- "CSHC.com" refers to CSHC.com, Inc.
- "You" refers to the user or subscriber.
- "Software" refers to the CSHC.com training content and software.
- "Site" refers to the CSHC.com web site.
- "Agreement" refers to this terms and conditions of use agreement
- "Terms" refers to the terms and conditions of use found within this Agreement

2. LICENSE: CSHC.com hereby grants to You a worldwide, non-royalty bearing, non-exclusive license to use the Software according to the provisions contained herein and subject to payment of the applicable subscription fees.

3. FEES: The rights granted under this Agreement are effective only upon payment of the subscription fees, which are strictly non-refundable other than as expressly provided herein. The term "monthly subscription" is defined as any 30 day period. The monthly subscription will be renewed automatically each 30 day period unless you cancel the subscription. The term "yearly subscription" is defined as one 365 day period. A yearly subscription terminates automatically at the conclusion of each 365 period.
CSHC.com reserves the right, in its sole discretion, to change, modify, or discontinue any aspect or feature of this site, including, without limitation, the content, availability, access and/or the terms of this site, in whole or in part, or to impose new conditions, including, without limitation, a modification of fees and charges for use at any time. Such changes, modifications, additions or deletions will be effective immediately upon notice thereof, which notice may include posting such changes on this Site. CSHC.com may terminate this Agreement at any time, without notice to you, if it believes, in its sole judgment, that you have breached or may breach any term or condition of this Agreement, or it may terminate this Agreement for its convenience or for any other reason.

4. RESTRICTIONS: You may not do any of the following:
- Save the Software to Your hard disk or other storage medium;
- Permit others to use the Software;
- Copy, modify, reverse engineer, disassemble, redistribute, republish or adapt the Software;
- Make derivative works based on the Software;
- Publish or otherwise disseminate the Software;
- Delete any author attributions, legal notices, or proprietary designations or labels that you upload;
- Manipulate or otherwise display the Site or any of its content by "deep linking" or "framing" or similar navigational technology;
- Violate CSHC.com's security mechanisms, access any data or server you are not authorized to access; or otherwise breach the security of the Site or corrupt the Site in any way;
- Use the Site in any manner that adversely affects the availability of its resources to other users;
- Transmit any material that that contains a virus or computer data

Figure A.18.   Terms and Conditions Page.

Home
Training
CD-ROMs
Books
Tips
Testimonials
Library

Learning Adobe Acrobat 6 CD-ROM

Table Of Contents | Support | Order This Cd

Learning Adobe Acrobat 6

Learning Acrobat 6 is a movie-based tutorial for people who want to quickly get up to speed with Adobe Acrobat. Covering both Acrobat 6 Standard and Professional, these hands-on exercises teach you how to take your PDFs to the next level by adding interactivity such as links, bookmarks, and form fields. You'll also learn how to use Acrobat for commenting on documents in a group review scenario, and how to create dynamic PDF presentations by embedding multimedia items like sound and video. By following along with this tutorial, you'll master key features of Acrobat 6 Standard and Professional in no time.

Running Time: 7.5 hours.

Samira Kubba is an Adobe Certified Acrobat Expert. Samira has been instructing students in Acrobat since version 3, and it remains as one of his favorite applications to teach. A freelance software trainer, Samira has taught on-site classes at private companies, college and universities. He is the author of Acrobat 6 Hands-On-Training and Mac OS X Hands-On-Training, as well as the training CD Learning iLife.

Home
Training
CD-ROMs
Books
Tips
Testimonials
Library

Learning Adobe Acrobat 6
Learning Adobe Acrobat 6 is a movie-based tutorial for people who want to quickly get up to speed with Adobe Acrobat. Covering both Acrobat 6 Standard and Professional, these hands-on exercises teach you how to take your PDFs to the next level by adding interactivity such as links, bookmarks, and form fields. You'll also learn how to use Acrobat for commenting on documents in a group review scenario, and how to create dynamic PDF presentations by embedding multimedia items like sound and video. By following along with this tutorial, you'll master key features of Acrobat 6 Standard and Professional in no time.
Running Time: Approximately 7.5 hours
For a full description, visit the Learning Adobe Acrobat 6 CD-ROM site.

Price $99.95

you can perches Learning Adobe Acrobat 6 Book. For a full description, visit the Learning Adobe Acrobat 6 Book site.

Price $44.99
Final Price $35.95
You save $9.04

Learning Adobe Acrobat 6 is a movie-based tutorial for people who want to quickly get up to speed with Adobe Acrobat. Covering both

Figure A.19.   Adobe Acrobat 6 CD-ROM page.

Adobe After Effects 6 H•O•T Book

Troubleshooting FAQ | About H•O•T Books | Order This Book

Introduction

CSHC.com/books is dedicated to helping Web designers and developers understand tools and design principles. CSHC.com offers hands-on workshops, training seminars, conferences, on-site training, training videos, training CDs, and "expert tips" for Web design and development. To learn more about our training programs, books, and products, be sure to give our site a visit at http://www.CSHC.com.

A Note from CSHC
It's been a great pleasure to dig back into my After Effects roots. While many people know me as a Web graphics specialist, I started our creative life in filmmaking— specifically by creating special effects and motion graphics for television, music videos, industrial films, commercials, and motion pictures. Our professional life in animation began around 1980.

We created the Hands-On Training series of books because we believe there is a need for this type of training in the computer book field. In our opinion, most people buy computer books in order to learn, yet it is amazing how few of these books are actually written by teachers. In this book, you will find carefully developed lessons and exercises to help you learn After Effects 6. There are many excellent books out on After Effects, but most, if not all, are for intermediate to advanced users. This book will help you build the strong foundation you need to approach the more difficult projects that you'll find in those books. (Many other books are listed in the "Resources" appendix at the end.) This book is written for beginning After Effects learners who are looking for a great tool to make motion graphics for the Web, CD-ROM, DVD, video, or film. The premise of the hands-on exercise approach is to get you up to speed quickly in After Effects while actively working through the book's lessons. It's one thing to read

Troubleshooting FAQ

About Adobe After Effects 6 | About H•O•T Books | Order This Book

Why Do I Get a Gray Frame at the End of a Composition?

The After Effects Timeline often shows a gray frame if you manually move the Time Marker to the end. This is because the Timeline often extends one frame beyond the true end of the composition. Move to the last frame by pressing the End key on the keyboard or by clicking the Last Frame button on the Time Controls panel.

Why Does My RAM Preview Stop Short?

For RAM preview to work properly, you must have enough RAM in your computer. The amount of RAM you need varies depending on how complex and large your After Effects project is. The good news is that RAM is a lot less expensive than it has been in the past!

QuickTime Isn't Working—What Should I Do?

Try going to the Apple Web site and downloading the latest QuickTime plug-in. Make sure that After Effects is not open while you do this. If you are using Windows XP, make sure you have installed the latest updates. This is accomplished by choosing Start > All Programs > Windows Update. There have definitely been some updates that affected QuickTime compatibility, so don't neglect to try this!

What Can I Do When the "Missing Footage" Error Message Appears?

Figure A.20.   Adobe After Effect 6 page.

98

About Hands-On Training (H•O•T) Books

This series of books, developed by CSHC, encourages readers to learn by doing. It's ideal for those who want to learn a new tool but learn best from a hands-on approach. Many hands-on books offer exercises but fail to explain why, when or where you might apply the exercise to real-world situations. The classroom-tested exercises in CSHC's Hands-On Training series teach core principles of a given program and provide essential background information that teaches how a technique will benefit you in your own workflow. Hands-On Training books include all the lesson files on an accompanying CD-ROM, as well as instructional Quicktime movies to help you visualize difficult techniques. The premise behind the Hands-On Training series is that if you follow the exercises, you will learn the program. Because these books are not part of a vendor-based press (Adobe Press, Macromedia Press, Microsoft Press), they offer objective insight into the program's weaknesses and strengths, as well as solutions to common problems.

Future H•O•T Books:

Dreamweaver MX 2004 Hands-On-Training
Flash MX 2004 Hands-On-Training
Photoshop CS for the Web Hands-On-Training
OSX 10.3 Hands-On-Training
Illustrator CS Hands-On-Training
Flash MX 2004 Beyond the Basics Hands-On-Training
Dreamweaver MX 2004 Beyond the Basics Hands-On-Training

About CSHC.com/books:

CSHC.com/books are published in association with SAKHAR. All books under this label are devoted to providing professional-level training in Web design tools and principles. Most book imprints are run by professional book publishers or software vendors, while CSHC.com/books is spearheaded by a professional industry leader and educator, CSHC. Our belief is that this "insiders" perspective will differentiate our books as non-biased, genuinely helpful, and effective training resources for creative professionals.

About Mohammed Saeed | Ask Expert | CSHC's newsletter | links | Contact us
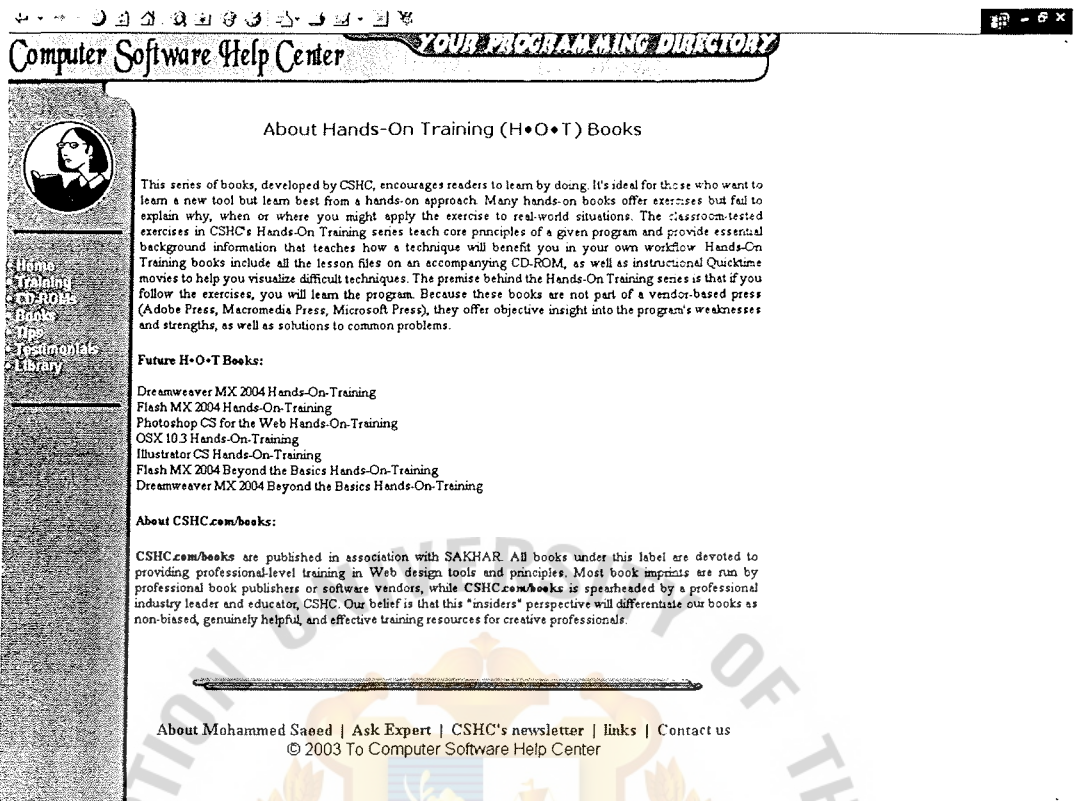© 2003 To Computer Software Help Center

Figure A.21.   About H•O•T Books Page.

APPENDIX   B

DATABASE DESIGN

Table B.1.   Customer Record.

No	Field Name	Data Type	Length	Decimals	Remarks
1	CustomerNo	Integer	7		Primary Key
2	CustomerFirst	Character	15		
3	CustomerLast	Character	15		
4	CustomerAdd	Character	200		
5	CustomerTel	Character	15		

Table B.2.   Product Record.

No	Field Name	Data Type	Length	Decimals	Remarks
1	ProdCode	Character	5		Primary Key
2	ProdName	Character	30		
3	ProdDesc	Character	200		
4	ProdPrice	Currency	10	2	
5	ProdSalesP	Currency	10	2	
6	ProdDate	Time/Date	8		
7	CustomerNo	Integer	7		
8	SaleNo	Integer	2		
9	InvoiceNo	Integer	4		

100

Table B.6.   Data Dictionary of Database Records.

Field Name	Description
CashRecvTotal	Total cash amount received
CatCode	Product category code number
CatName	Name of product category
CustomerAdd	Customers address
CustomerFirst	Customers first name
CustomerLast	Customers last name
CustomerNo	Customers assigned number
CustomerTel	Customers telephone number
InvoiceNo	Invoice number
ProdCode	Product code
ProdDate	Date product was purchased
ProdDesc	Product Description
ProdName	Product name
ProdPrice	Product bought price
ProdSalesP	Product selling price
SaleAdd	Salespersons address
SaleName	Salespersons name
SaleNo	Salespersons assigned number
SaleTel	Salespersons telephone number

102

BIBLIOGRAPHY

English References

1. Chaffey, D., R. Mayer, and K Johnson. Internet Marketing: Strategy, Implementation and Practice. London: Prentice-Hall Inc., 2000.

2. Porter, M. E. Competitive Strategy: Techniques for Analyzing Industries and Competitors. USA: Simon & Schuster Inc., 1998.

3. Schumann, W. Gemstones of the World, Revised Edition. New York: Sterling Publications, 2002.

4. Senn, J. A. Analysis and Design of Information Systems, Second Edition. New York: McGraw-Hill, 1989.

Website References

1.   http://google.com

2.   http://internetnews.com

3.   http://www.adage.com

4.   http://www.allaboutyourownwebsite.com

5.   http://www.bizrate.com

6.   http://www.businessinfotech.com

7.   http://www.ecommercetimes.com

8.   http://www.industrialmag.com

9.   http://www.quickmba.com

10. http://www.web-source.net

11. http://www.webwizguide.info

12. http://www.about.com

13. http://www.internet.com

14. http://www.freeskills.com/