



Spirit Production Company Website

by

Mr. Prinya Janchaingam

A Final Report of the Three-Credit Course  
IC 6997 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

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Project Title            Spirit Production Website

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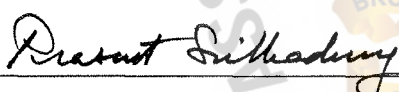
Project Advisor        Rear Admiral Prasart Sribhadung

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The Graduate School of Assumption University has approved this final report of the three-credit course, IC 6997 E-Commerce Practicum, submitted in partial fulfillment of the requirements for the degree of Master of Science in Internet and E-Commerce Technology.

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## ABSTRACT

Computers facilitate life styles of the people and make them feel more comfortable to use it for many purposes such as chatting online, sending data, retouching pictures, printing out documents for the entertainment purposes such as playing games, listening to radio, watching movies, as most of these activities can be done online. Internet can replace the distance, gaining more income with the cost of using Internet that is cheaper than using telephone line. Up to this point the company can make sure that computers catch up with our life little by little even though you work in any job, and people who don't know how to use computer have no guarantee for them to improve the quality of their work and also their salaries.

For people who are concerned about their business and want to expand it, this may be the right moment if they know how to catch up the right target market and also know the product that satisfies a large group of customers.

Spirit Production web site provides a better way for sending the customer's product creativity on the web, And we can make sure people will be more concerned about creativity as the slogan "Spirit Production... Your Design Inspires Your Creativity"

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## I. INTRODUCTION

### 1.1 Background of the Project

Nowadays, Computers play an important role in our daily life. From the research of Thai Government (Dusit polls) in the year 2003 it shows there is at least every 1 out of 10 in average who know how to use the computer or use it for their daily life. And the amount has been increasing to 4 out of 10 if compared with people who live in cities. Computers facilitate life styles of the people and make them feel more comfortable to use it for many purposes such as chatting online, sending data, retouching pictures, printing out documents for the entertainment purposes such as playing games, listening to radio, watching movies, as most of these activities can be done online. Internet can replace the distance, gaining more income with the cost of using Internet that is cheaper than using telephone line. Up to this point we can make sure that computers catch up with our life little by little even though you work in any jobs, and people who don't know how to use computer have no guarantee for them to improve the quality of their work and also their salaries.

Today, Thai government also encourages people to use IT technologies to support their daily lives and increase the production of the whole system in Thailand. People who concerns about their business and want to expand it, this may be the right moment if they know how to catch up the right target market and also know the product that satisfy a large group of customers.

One way to expand the channel of distribution is to go online with e-commerce, but it is not that easy. The entrepreneurs have to plan well about their business based on reality, not the theory from the book. After make a good plan then Internet will be the good utilities to support the business.

In Thailand people are always open-minded for new ideas or new innovations but they may not be sure to launch their creativity to the market or another reason is the creative launching cost is too high for them to try.

Spirit Production creates Website to provide a better way for sending the customer's product creativity on the web after they contact us. Our service is to create and edit our customer media and make it more interactive and more interesting. Example: if one customer wants to create an online resume, we will suggest him to create the online media as interactive resume that's more interesting than paper documents that didn't show anything about that people, it's just a paper. Or if the customer got their media and want to create it as a TV program we'll edit it to make it more interactive as the customers want and put it on the web.

From this point people will get benefits from our services and they can also show out their creativity on the Web site. And we can make sure people will be more concerned about creativity as our slogan "Spirit Production...Your Design Inspires Your Creativity"

## **1.2 Objectives of the project**

- (a) To create a website for the community of the users (customer) and people who are interested in making a design and creative thinking.
- (b) To be a useful website for the visitors to find design information and creative references.
- (c) Expand our business to go online

## **1.3 Scope of the Project**

- (a) Website will provide web board as the community to exchange the idea and creativity of our customers.

- (b) Website will provide news and update entertainment information that visitors want to know.
- (c) Website will create the member database for the members to receive the mail of news and events.
- (d) Website provides our customer product samples as gallery online.
- (e) Website provides links to other related and interesting web sites.

#### 1.4 Deliverable

- (a) The Spirit production website
- (b) A project report consists of
  - (a) Existing system (Business background)
  - (b) Proposed system(Hardware and software configuration)
  - (c) Project design and implementation
  - (d) Marketing plans



## II. LITERATURE REVIEW

### 2.1 Internet History and Terminology <8>

The Internet, sometimes called simply "The Net," is a worldwide system of computer networks - a network of networks in which users at any one computer can, if they have permission, get information from any other computer (and sometimes talk directly to users at other computers). It was conceived by the Advanced Research Projects Agency (ARPA) of the U.S. government in 1969 and was first known as the ARPANet. The original aim was to create a network that would allow users of a research computer at one university to be able to "talk to" research computers at other universities. A side benefit of ARPANet's design was that, because messages could be routed or rerouted in more than one direction, the network could continue to function even if parts of it were destroyed in the event of a military attack or other disaster.

Today, the Internet is a public, cooperative, and self-sustaining facility accessible to hundreds of millions of people worldwide. Physically, the Internet uses a portion of the total resources of the currently existing public telecommunication networks. Technically, what distinguishes the Internet is its use of a set of protocols called TCP/IP (for Transmission Control Protocol/Internet Protocol). Two recent adaptations of Internet technology, the intranet and the extranet, also make use of the TCP/IP protocol.

For many Internet users, electronic mail (e-mail) has practically replaced the Postal Service for short written transactions. Electronic mail is the most widely used application on the Net. You can also carry on live "conversations" with other computer users, using Internet Relay Chat (IRC). More recently, Internet telephony hardware and software allows real-time voice conversations.

The most widely used part of the Internet is the World Wide Web (often abbreviated "WWW" or called "the Web"). Its outstanding feature is hypertext, a method of instant cross-referencing. In most Web sites, certain words or phrases appear in text of a different color than the rest; often this text is also underlined. When you select one of these words or phrases, you will be transferred to the site or page that is relevant to this word or phrase. Sometimes there are buttons, images, or portions of images that are "clickable." If you move the pointer over a spot on a Web site and the pointer changes into a hand, this indicates that you can click and be transferred to another site.

Using the Web, you have access to millions of pages of information. Web browsing is done with a Web browser, the most popular of which are Microsoft Internet Explorer and Netscape Navigator. The appearance of a particular Web site may vary slightly depending on the browser you use. Also, later versions of a particular browser are able to render more "bells and whistles" such as animation, virtual reality, sound, and music files, than earlier versions.

#### Benefits of the Internet<7>

- (a) Tax Breaks. Yes, terrific tax breaks. When you operate a home based business you can write off the costs for:
  - (a) The area in your home you use for business
  - (b) Office supplies (including your computer)
  - (c) Related tools (hosting fees, journals, magazines, cable TV),
  - (d) Job expenses
  - (e) Travel expenses

- (f) Meals and entertainment
  - (g) Advertising
  - (h) Your phone
  - (i) Legal and professional services
  - (j) Training
  - (k) And much, much more.
  - (l) Talk to an accountant to get a complete list of all the tax breaks you may qualify for.
- (b) Low Startup Costs. You can actually start making money on the internet by joining an affiliate program for free and marketing with free ads. Even if you're getting your own site up it can be done for only a few hundred dollars.
- (c) Low Operating Costs. Once you're up and running you can build your business on a budget of a hundred dollars a month or less. I'm including operating expenses like hosting fees, merchant accounts, etc. The less money you spend, the more time it will take, but you don't have that choice in most businesses. You usually have to have a lot of cash or you can't get started.
- (d) High Profit Margin. Since your costs are low you keep more of the money you make from sales. If you sell a product delivered online (like e-books) you don't have to pay for shipping either.
- (e) Market for Little or No Money. You probably already know this, but don't take it for granted. Online you can submit free ads, do ad swaps with your ezine, use pay per click search engines, etc. Check out how much advertising

costs offline. Just to mail 1,000 letters costs \$340.00! Instead you can e-mail your offer to 100,000 people for free.

- (f) You don't need to own your products. There are a ton of folks with great products you can sell through affiliate programs. You can make a great living just from marketing for other people in your spare time.
- (g) Time Freedom. You build your business as fast or slow as you like. You can work all day or 2 hours at night after you put your kids to sleep. Work one day a week or seven. It's ALL up to you.
- (h) Job Security on Autopilot. Remember job security? It doesn't exist in the world of being an employee. If it takes you 3 or even 5 years to build your business from part time to full time at home, you're still ahead of millions of people depending on a paycheck for all 40 to 60 years they have to be an employee.
- (i) Open 24 hrs in every country. ...Oh yeah, that. Your site works for you while you sleep. So does your advertising, the articles you write, and your ezine. Consider every little thing you do to market to be a new round the clock employee you just hired for free. These employees will stay out on the web working for you forever. The BIG SECRET is that the older your online business gets, the less work it takes to make more money.
- (j) You keep the cash. If you're an employee you are a cog in the company machine. The company keeps most of the money your labor produces. As you build your company online you keep ALL the money your labor produces. Since you're the owner instead of the employee, the bigger your business grows the fatter YOUR wallet gets!



- (k) You don't have to figure it out. Plenty of other folks have been in this game for awhile. They created the blueprints so you don't have to. If you learn how to do it from people who are already making it's simple. You do what they've done and you will get the same results.
- (l) Cheap and Free resources. You can subscribe to ezines full of free tips. You can buy information on how to build your business for as little as \$14.97. Obviously, the more expensive the information is the more valuable it is and it will help you to build faster, but you can find plenty of great support that's cheap too.
- (m) You are a part of a community. Online marketers are usually nice people who like to help each other. It's a great bunch of people to be dealing with. If you want support along your journey it's only an e-mail away.

## **2.2 World Wide Web (W3) <8>**

As the popularity of the Internet increases, people become more aware of its colossal potential. The World-Wide Web (WWW) is a product of the continuous search for innovative ways of sharing information resources. The World Wide Web

The World Wide Web came about due to the introduction of the Hypertext Markup Language (HTML). HTML is a computer language which formats text on the page, providing for headings, different colored text etc. This simplifies the amount of data which needs to be transmitted in order to display a complex formatted page of text on the screen.

A Web browser, a piece of application software usually supplied with the operating system, is used to display the page on the screen.

The browser contacts a server on the Internet, which sends back a default HTML page to be displayed. From this default page information contained on other HTML pages can be displayed in the browser. The default page and all the other pages stored on the server constitute a web site. All the web sites in the world form the World Wide Web (WWW).

The subsequent immense growth of the World Wide Web was due to the fact that organizations found that a lot of information can be held on a web site and manufacturers could advertise their wares to the world.

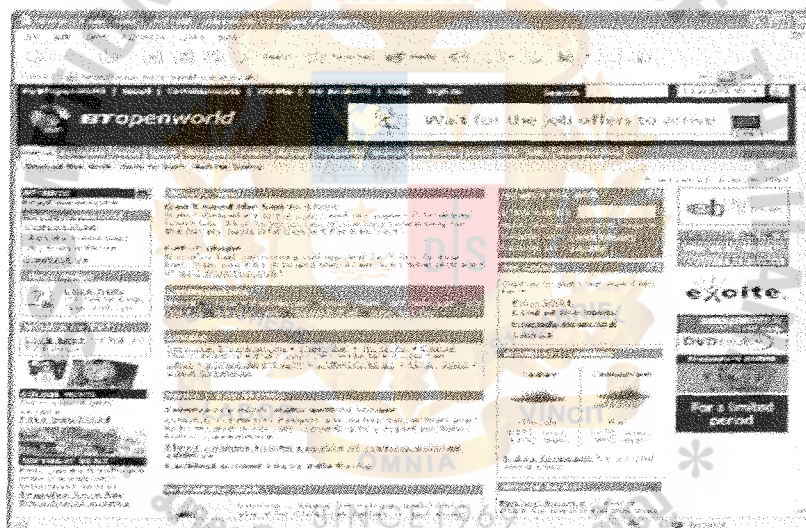


Figure 2.1. World Wide Web.

### What is the World-Wide Web?

People have dreamt of a universal information database since late nineteen forties. In this database, not only would the data be accessible to people around the world, but it would also "easily link to other pieces of information, so that only the most important data would be quickly found by a user."

Only recently has the technology caught up to make such systems possible. The most popular system currently in use is the World-Wide Web. The official description defines the WWW as a "wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents." In simpler terms, the Web is an Internet-based computer network that allows users on one computer to access information stored on another through the world-wide network.

### Origins of the WWW

The World-Wide Web began in March 1989 at CERN. (CERN was originally named after its founding body the 'Conseil European pour la Recherche Nucleaire,' and is now called 'European Laboratory for Particle Physics.')

"CERN is a meeting place for physicists from all over the world, who collaborate on complex physics, engineering and information handling projects." Thus, the need for the WWW system arose "from the geographical dispersion of large collaborations, and the fast turnover of fellows, students, and visiting scientists," who had to get "up to speed on projects and leave a lasting contribution before leaving."

CERN possessed both the financial and computing resources necessary to start the project. In the original proposal Berners-Lee outlined two phases of the project:

- (a) *First*, CERN would "make use of existing software and hardware as well as implementing simple browsers for the user's workstations, based on an analysis of the requirements for information access needs by experiments."
- (b) *Second*, they would "extend the application area by also allowing the users to add new material."

3039 e.1

Berners-Lee expected each phase to take three months "with the full manpower complement": he was asking for four software engineers and a programmer. The proposal talked about "a simple scheme to incorporate several different servers of machine-stored information already available at CERN." This 'scheme' was to use hypertext to provide "a single user-interface to many large classes of stored information such as reports, notes, data-bases, computer documentation and on-line systems help."

Set off in 1989, the WWW quickly gained great popularity among Internet users. For instance, at 11:22 am of April 12, 1995, the WWW server at the SEAS of the University of Pennsylvania "responded to 128 requests in one minute. Between 10:00 and 11:00, it responded to 5086 requests in one hour, or about 84 per minute," Even years after its creation, the Web is constantly maturing: in December 1994 the WWW was "growing at roughly 1 per cent a day -- a doubling period of less than 10 weeks."

As popular as it is at the moment, the WWW is not the only possible implementation of the hypertext concept. In fact, the theory behind the WWW was based on a more general project 'Xanadu', that is being developed by Ted Nelson.

#### Structure of the WWW

The WWW project is based on the principle of *universal readership*: "if information is available, then any (authorized) person should be able to access it from anywhere in the world." The Web's implementation follows a standard *client-server* model. In this model, a user relies on a program (the client) to connect to a remote machine (the server), where the data is stored. The architecture of the WWW is the one of clients, such as Netscape, Mosaic, or Lynx, "which know how to *present* data but not what its origin is, and servers, which know how to *extract* data", but are ignorant of how it will be presented to the user.



One of the main features of the WWW documents is their *hypertext* structure. On a graphic terminal, for instance, a particular reference can be represented by underlined text, or an icon. "The user clicks on it with the mouse, and the referenced document appears." This method makes copying of information unnecessary: data needs only to be stored once, and all referenced to it can be linked to the original document.

#### Some weaknesses of the WWW

The World-Wide Web began as a set of simple protocols and formats. As time passed, the Web "began to be used as a test bed for various sophisticated hypermedia and information retrieval concepts." Unfortunately, these concepts were quickly absorbed by the general WWW community. "This means that experimental extensions of dubious use are now established parts of the Web."

Another flaw in the current structure of the WWW is the presence of many hypertext links that point to no longer existent documents. These occur when authors rename or delete their works from the Web. Since the system has no way of registering links to one's document, an author can not notify his readers of the reorganization. The Xanadu system, on the other hand, does not have this problem since it does not allow users to delete documents from the system.

#### Success of the WWW

What is the reason for the immense success of the World-Wide Web? Perhaps, it can be explained by CERN's attitude towards the development of the project. As soon as the basic outline of the WWW was complete, CERN made the source code for its software publicly available. CERN has been encouraging collaboration by academic and

commercial parties since the onset of the project, and by doing so it got millions of people involved in the growth of the Web.

The system requirements for running a WWW server are minimal, so even administrators with limited funds had a chance to become information providers. Because of the intuitive nature of hypertext, many inexperienced computer users were able to connect to the network. Furthermore, the simplicity of the Hypertext Markup Language, used for creating interactive documents, allowed these users to contribute to the expanding database of documents on the Web. Also, the nature of the World-Wide Web provided a way to interconnect computers running different operating systems, and display information created in a variety of existing media formats.

In short, the possibilities for hypertext in the world-wide environment are endless. With the computer industry growing at today's pace, no one knows what awaits us at the turn of the 21st century.

### **2.3 E-work**

Over the last decade we have seen a sharp increase in electronic workflow in the office. GroupWare systems such as Lotus Notes, Microsoft Exchange, among others, have made it possible for businesses to replace most, if not all of their former paper-based systems with electronic equivalents. Forms that used to be filled out by hand can now be done electronically. The work can be completed on electronic forms and posted electronically. People can review, approve, and send information at the click of a button. This technique carries with it a number of advantages over the conventional paper-based systems. Electronic workflow offers the following advantages over paper-based systems:

Allows several people to work with information concurrently

- (a) Is a lot faster than manually passing paper around
- (b) Offers better control – no bits of paper floating around
- (c) Provides a higher level of security
- (d) Allows for easy updating

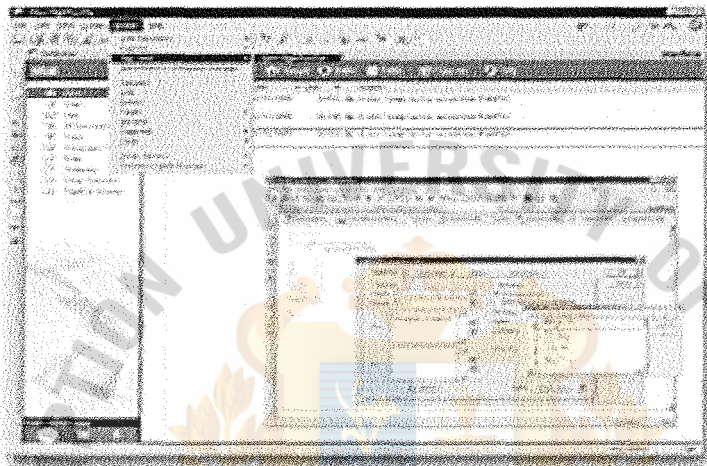


Figure 2.2. E-works.

Modems, the Internet and e-work have provided a means for more people to work from home, using the modems to connect to their business networks. Modern communications also allows for files to be stored on, and retrieved via, the Internet.

Modems can be used by IT System Support Technicians to access servers and other machines located at remote locations in order to remotely log-on. Remote Log-on can be used to run diagnostics and thus there is the possibility that faults can be rectified without having to visit the customer's premises.

Web browsers and the Internet can be used by administrators to administrate servers over the Internet, again avoiding the necessity to visit the physical site containing the server.

## 2.4 E-Commerce (EC)

The terms 'e-commerce' and 'e-business' give a new way of doing business electronically. The first wave of electronic business was the exchange of information. Now the business is electronically transacted. We can buy goods on-line, book holidays or have texts translated over the Internet. Home banking is one application that is provided by most banks around the world. Looking up your balance, transferring money and other transactions are done every day by millions of people. Public administration has discovered the Internet as a means to talk to the public at election times.

The Internet, electronic funds transfer, e-commerce and the like have brought with them both opportunities and threats. Your business competitors may no longer be just the business down the street, but a business located in any number of places around the world.

The flip side of course is that your potential market is now not just your local area, but cashed up consumers across the world.

On-line and Internet commerce is currently experiencing dramatic growth. Aggregate employment is also expected to rise by half as a result of E-commerce. It is now a truism that to stay in business in the new millennium, e-commerce will have to be a part of your business.

According to experienced organizations, the introduction of e-commerce can, if it's done correctly:

- (a) lower transaction costs
- (b) reduce inventory holdings
- (c) provide a competitive business advantage



- (d) expand one's market
- (e) increase speed to market
- (f) streamline supply chain management

E-commerce includes electronic trading, electronic messaging, electronic data interchange (EDI), electronic mail (e-mail), electronic catalogues, internet, intranet and extranet services.

### E Commerce Strategy

To achieve this vision and objective, the entrepreneur will pursue the following four key strategies:

- (a) Facilitating E-Commerce for Business

You have to facilitate the uptake of e-commerce within the business community by actively promoting e-commerce to business, raising awareness and providing measures which support effective e-commerce adoption.

- (b) Creating the Capability

You have to assist in the provision of hard and soft infrastructure necessary for successful participation in the information economy.

- (c) Providing Leadership within Government

You have to coordinate with and influence other agencies, at the State, Commonwealth and Local level, to promote the benefits of e-commerce and to encourage them to develop initiatives aimed at increasing the uptake of e-commerce by the business community.

(d) Modeling the Way

You have to become an active adopter of e-commerce technologies leading to improvements in its internal business processes and service delivery and opportunities for clients and suppliers to be exposed to secure e-commerce transactions.

### Types of E Commerce

There are a number of different types of E-Commerce:

(a) B2B - Business to Business

Business to Business e-commerce has been in use for quite a few years and is more commonly known as EDI (electronic data interchange). In the past EDI was conducted on a direct link of some form between the two businesses where as today the most popular connection is the internet. The two businesses pass information electronically to each other. B2B e-commerce currently makes up about 94% of all e-commerce transactions.

(b) B2C - Business to Consumer

This type of e-commerce is where the consumer accesses the system of the supplier. It is still a two way function but is usually done solely through the Internet.

*Example:* A home user wishes to purchase some good quality wine. The user accesses the Internet site <http://www.craigs.com.au> and follows the links to read a report on the recommended wines. After reading the tasting notes the user follows the links to place an order along with delivery and payment

details directly into the merchant's inventory system. The wine is then dispatched from the suppliers' warehouse and in theory is delivered to the consumer without delay.

(c) C2B - Consumer to Business

Consumer to Business is a growing arena where the consumer requests a specific service from the business.

*Example:* Harry is planning a holiday in Darwin. He requires a flight in the first week of December and is only willing to pay \$250. Harry places a submission with in a web based C2B facility. Dodgy Brothers Airways accesses the facility and sees Harry's submission. Due to it being a slow period, the airline offers Harry a return fare for \$250.

(d) B2E - Business to Employee

Business to Employee e-commerce is growing in use. This form of e-commerce is more commonly known as an 'Intranet'. An intranet is a web site developed tom provides employees of an organization with information. The intranet is usually access through the organizations network, it can and is often extended to an Entrant which uses the Internet but restricts uses by sign on and password?

(e) C2C - Consumer to Consumer

These sites are usually some form of an auction site. The consumer lists items for sale with a commercial auction site. Other consumers access the site and place bids on the items. The site then provides a connection between

the seller and buyer to complete the transaction. The site provider usually charges a transaction cost. In reality this site should be call C2B2C.

#### Steps to E Commerce the Essential Internet Tools

(a) Develop your website

Contact an Internet Service Provider (ISP) who will register a domain name for your business

(b) Produce appropriate electronic information for your website

Customers around the world will view your website, so it's important to produce appropriate business and product information. You may offer downloadable product samples, information and other interactive online discussion services, but significant publications and products should be offered as a follow-up service.

(c) Provide online ordering facilities

Many websites act simply as a corporate brochure for a company. In this fashion overseas visitors to your site can directly place orders for your products and services.

(d) Provide online payment facilities

As well as offering online ordering facilities, your website should also offer online payment facilities.

Not only will this mean that the company receives payment before the order is filled, it will be a boon to the business' cash flow as you are no longer waiting for payment.



- (e) Promote your web address

It's all very well to have an effective website with terrific corporate information, as well as online ordering and payment facilities, but if no-one knows the address this website will be a useless marketing tool.

Promoting the web address for your business will become essential:

- (a) ensure the address is included in all appropriate search engines
- (b) hyperlink your site to other web addresses (e.g. many industry associations provide links from their website to their members)
- (c) Print your web address on all stationery, advertisements, brochures, packaging, orders, and invoices and anywhere else you promote your business.

Issues to consider when designing an effective business website include:

- (a) Speed - Slow sites will deter online users. A lot of heavy graphics can cause problems as can the wrong servers for site hosting. However as more and more Internet users gain access to cable Internet this problem will decrease.
- (b) Navigation - More and more web pages are beginning to look the same as they start to adopt similar navigation tools to help the user move around the site. While this may not seem very creative it does set a standard to frequent online shoppers.
- (c) Content - More often than not, less is best. The follow-up material that you can post or email to your customers will bring them back to your site.

- (d) Interactivity - Ask your customers for their input. Also offer facilities to enable your customers to order goods, check their account balances, view inventory, check order status and update their contact information.
- (e) Suppliers - Offer the facilities to enable your suppliers to retrieve purchase orders and send invoices to your web site.

### Turning Hits into Sales

World Wide Web has only taken four years for the Internet to reach 50 million users. This compares to 36 years for radio, 13 years for TV and 16 years for personal computers.

It is expected that in just over two years time worldwide sales using the Internet will generate more than \$1 trillion. It is not uncommon for small businesses to feel apprehensive about using ecommerce.

People often worry about alienating existing customers and the challenges of new technology without thinking of the benefits:

- (a) regional businesses can overcome the tyranny of distance
- (b) reduced costs associated with marketing, order management, billing and supply chain management
- (c) better business to business operations (inventories, shipping, reporting, sales transactions and customer support)
- (d) Global advertising of their products and services at lower costs.

The Department of State Development and Innovation assists Queensland businesses to get "on-line" through:

- (a) E-commerce training for medium sized businesses in regional Queensland through a series of workshops and seminars.
- (b) Employing nine IT specialists in the metropolitan and coastal areas of the State, to assist business making the transition to e-commerce.

## 2.5 Broadband Technology

The term broadband refers to any type of transmission technique that carries several data channels over a common wire. DSL service, for example, combines separate voice and data channels over a single telephone line. In DSL, voice fills the low end of the frequency spectrum and data fills the high end.

In home networking, "broadband" usually refers to high-speed Internet access using this transmission technique. Both DSL and cable modem are common broadband Internet technologies. So-called broadband routers and broadband modems are network devices that support both DSL and cable.

### DSL Definitions

Digital Subscriber Line (or Loop) technology provides high-speed, broadband network connections to homes and small businesses. DSL utilizes the same cabling used for normal telephones, but it can offer higher data rates through use of so-called "*digital modem*" technology. Still a relatively new technology that telephone companies and other *access providers* are in the process of deploying for the first time, DSL remains unavailable in many locations. Some customers already subscribed to DSL -- so-called "early adopters" -- have experienced the growing pains of this very promising network service.

### DSL Variations

This page discusses the main flavors of xDSL (ADSL, SDSL, VDSL, and more).

### The xDSL Family Tree

The xDSL "family tree" includes two main branches -- symmetric and asymmetric. Symmetric DSL services provide identical data rates upstream and downstream; asymmetric DSL provides relatively lower rates upstream but higher rates downstream.

Four main variations of xDSL exist:

- (a) ADSL, G.Lite and RADSL
  - (b) HDSL, SDSL, and SHDSL
  - (c) VDSL (VADSL, BDSL)
  - (d) IDSL
- (a) ADSL or Asymmetric Digital Subscriber Line was designed to provide higher downstream data rates at the expense of upstream rates. Many typical uses of the Web -- such as file downloads and general web browsing -- benefit from greater downstream bandwidth but require relatively little in the opposite direction.

*Universal ADSL* (also known as G.Lite) is a form of ADSL that improves on one of the weaknesses of regular ADSL -- installation. Regular ADSL generally requires a technician visit to the client site to install the splitter device that divides the frequency spectrum for voice and data. G.Lite does not require that this splitter be installed, but it does so at the expense of lower data rates. G.Lite supports a maximum of 1,544 kbps (384 kbps



upstream) whereas regular ("full-rate") ADSL can support more than 8,000 kbps (as shown earlier).

Another related technology, *Rate-Adaptive DSL* (RADSL), is an implementation of ADSL that automatically configures the modem at startup to adjust its rate according to the quality of the phone line. Like G.Lite, RADSL supports a much lower maximum data rate (1,088 kbps) than regular ADSL.

- (b) HDSL, SDSL and SHDSL symmetric solution, High Bit / Data-Rate DSL offers the same bandwidth both upstream and downstream. HDSL requires two phone lines to deliver the basic data rate (1,544 kbps), and it can deliver a maximum rate of 2,048 kbps using three lines.

Symmetric DSL improves on the older HDSL technology by implementing the same basic data rate (1,544 kbps) while requiring only a single phone line.

Another variation, Symmetric High-Bit-Rate DSL attempts to improve on both HDSL and SDSL by only requiring a single line and by integrating low-level services of interest to small businesses.

- (c) VDSL

Very High Data-Rate DSL needs shorter cable lengths than most other forms of DSL (maximum 4,500 feet as compared to 18,000 feet for regular ADSL), but it also achieves the highest data rate (roughly 51,840 kbps). VDSL is also known as BDSL. It was originally named VADSL ('A' for asymmetric)

but later was extended to support both symmetric and asymmetric varieties of DSL.

The bandwidth levels supported by VDSL are needed to support certain high-end applications such as High-Definition Television (HDTV) that requires, for example, up to 20,000 kbps.

(d) IDSL

*ISDN DSL* implements -- as the name suggests -- a hybrid DSL/ISDN solution. As such, IDSL offers only limited data rates (128 kbps, although multiple circuits may be bonded).

Benefits from DSL Technology

(a) Speed

What makes DSL technology appealing, first of all, is its speed. In its very fastest incarnations, DSL offers more than 100 times the network performance of a traditional analog modem. While the precise speed of a connection depends on the variety of xDSL deployed, even a basic ADSL setup should outperform those modems by a factor of 20 or more.

Because DSL uses the same telephone line wiring as traditional modems, it may not be immediately obvious how it achieves such high speeds. In a nutshell, DSL works on the unused (high) frequencies of the line. DSL modems contain an internal signal splitter that carries voice signals on the usual low frequencies (from 0 up to 4kHz) and data signals above that. This splitter, consequently, allows

simultaneous access to the line by the telephone and the computer. Customers who might ordinarily have required a second phone line won't need it for DSL service.

(b) Access

Ideally, DSL service remains "on" all of the time. With an always-on connection customers no longer need to physically dial up to the Internet Service Provider (ISP) to "log in to the Internet." A few access providers (such as Pacific Bell) now offer DSL service implemented with PPPoE (Point-To-Point Protocol over Ethernet) that does not support always-on, but even in this case a DSL router can automate the connection process. People should be aware that long-lived connections like DSL can have security issues. Many DSL customers have installed personal firewall products on their home networks to guard against external attacks.

#### BENEFITS FOR BUSINESS

Many businesses have already recognized the benefits of internet access but are still using traditional dial up services which tie up the telephone line. Businesses which have taken the plunge for broadband services report increased sales, greater cost savings, better productivity, improved employee satisfaction and a healthier bottom line overall as a result.

#### ALWAYS ON, ALWAYS IN TOUCH

- (a) Broadband services put an end to the dull routine of using a dial-up connection via a telephone modem and the need to repeat the process every time the connection fails.

- (b) With broadband, when you're switched on, you're always online, with virtually instant access to any information or service.
- (c) Because broadband splits your existing telephone line, you can make and take voice calls as normal even when you are online – no more frustrating engaged tones for your customers and suppliers.

#### GOING GLOBAL

With your own interactive website and multiple email addresses you can improve your image and the way you deal with your existing customers, as well as more effectively market and sell your goods and services to a global audience.

#### MORE EFFICIENT WEB SERVICES

- (a) Put an end to the frustrating world wide wait for even the simplest website to appear with downloads at up to 40 times the speed you can get via a standard telephone and modem.
- (b) Searching for and checking out potential customers and suppliers on the internet, and downloading or transmitting all kinds of information, graphics, materials and guidance becomes quicker and easier.

#### PREDICTABLE COSTS

- (a) Fixed monthly charges are the norm with broadband services so there is no extra to pay no matter how often you use it.
- (b) By using an Applications Service Provider you could better manage the costs and improve the functionality and security of your business software, leasing it online.

#### LARGE ORGANISATIONS

#### AND CORPORATIONS



- (a) BT offers higher speed and symmetric broadband services to meet the needs of major companies, corporations and other large organizations in the public and private sectors. With broadband, large organizations can:
- (b) Take full advantage of broadband's always on, high speed access and symmetric capabilities, saving time and effort downloading and transferring large digital files.
- (c) Take their goods and services online and into a global marketplace.
- (d) Offer new services such as online ordering, account management and electronic payments to their customers, employees and suppliers.
- (e) Extend their internal networks and email systems to encompass remote offices, and home workers.
- (f) Tailor the bandwidth that employees can use to suit the specific needs of the job.
- (g) Get better performance and value from existing systems and software.
- (h) Predict and manage costs effectively with BT's flat rate charging structure.

#### BENEFITS FOR HOME

#### ALWAYS ON, ALWAYS AVAILABLE

- (a) Broadband ends the dull routine of dial-up connection and having to repeat the process every time the connection goes down.
- (b) ADSL Broadband splits your existing phone line so you can make and take calls as normal even when you are online – no more infuriating engaged tones for your friends and family.

- (c) With broadband, when you're switched on, you're always online, with virtually instant access to any information or service.

#### HIGH SPEED ACCESS, HIGH SPEED DOWNLOADS

- (a) Bring an end to the world wide wait for even the simplest website to appear - with downloads at up to 10 times the speed you can get via a standard telephone and modem, surfing the net becomes fun not frustrating.
- (b) Download music faster than you can play it. Finding, checking out and downloading animations, graphics and video, and movie, news and sports clips are quicker and easier.

#### CONTROLLABLE COSTS, FIXED MONTHLY CHARGES

- (a) Fixed monthly charges are the norm with broadband services so there is no extra to pay no matter how often you use it.
- (b) Because ADSL broadband splits your existing telephone line, you don't need a second line to make and take voice calls as normal even when you are online.

#### SIMPLE INSTALLATION

Straightforward self-install connections for broadband in the home now come as standard from many service providers so you don't waste time hanging around waiting for an engineer's visit.

#### WORKING FROM HOME

Fast, direct access to your corporate networks and files as easily as if you were in the office. And as you can be online and on the phone at the same time, you can use videoconferencing to play a full part on projects and in meetings.

### Competing Technologies

Needless to say, today's analog modems don't compete very well with DSL in terms of performance. *Modem bonding*, where two V.90 modems are close-coupled to one computer, may theoretically double the performance of a single modem. The increased network performance bonding provides (a factor of two theoretically) is good, but many users of the Internet need order-of-magnitude (factor of 10 or more) improvements in their connectivity speeds to support features like digital video in the home. For these purposes, DSL simply leaves analog in the dust.

- (a) *Cable modems* enable high-speed, always-on Internet access using the cable television lines that connect to some U.S. households. Cable can support network speeds comparable to those of DSL. Like some DSL services, the network speed upstream to the Internet will be slower than downstream to the home or office. But unlike DSL services (that all offer locally dedicated bandwidth), cable modem service involves locally shared bandwidth. This means the realized performance of a customer's cable will depend on how many other customers in that local area subscribe to the same service.
- (b) *Satellite* data service affords another option to those out of the reach of DSL (or cable) service. Satellite works at no more than one-third the speed that DSL does today -- and often less. But like DSL, satellite bandwidth is dedicated and speeds won't drop when others use it at the same time.

Satellite "mini-dish" systems weren't designed for two-way communications (they're the same ones that deliver TV), so satellite access to the Internet generally requires an analog phone line and modem for outgoing traffic.

- (c) Integrated Services Digital Network (ISDN) technology has been available for a number of years from the public telephone companies. Under ideal conditions, ISDN allows customers to receive data at rates just twice that of ordinary dial-up -- nowhere close to the data rates of cable modems and DSL. ISDN has generally been more widely available than DSL service, but the rapid expansion of DSL networks suggests this advantage is fading.

#### *DSL Availability - Line Qualification*

To be eligible for DSL service, the phone line involved must be "qualified." First, the home or business must lie within the distance limitations of DSL. Generally this means no more than approximately 18,000 feet of phone wire length to the public exchange. This phone line must also possess sufficient electrical quality characteristics.

The term 'public exchange' refers to a telephone company office that connects all of the many home and business phone lines in a locality.

In the United States, the term 'central office' is also used to refer to a public exchange.

#### *Line Quality and DSL Availability*

Many low-level technical details, outside of the customer's control, determine whether or not a telephone line is of sufficient quality to support DSL. Sometimes a technician can measure the line quality at the service provider's location without traveling to the customer's site. Sometimes a one-way measurement proves impossible, though, and testing must be done on both ends of the wire, increasing installation costs.



One particularly problematic technical issue for DSL is the use of ‘load coils’ on telephone lines. A load coil is a small electrical device that improves the ability of the line to transmit the human voice. Telephone companies installed these devices on lines over the years to improve the quality of their service. But ironically, while load coils work effectively on the low (voice) frequencies, they adversely affect the high (DSL data) frequencies. DSL service generally does not work over load coils.

#### *DSL Availability of Bandwidth*

The actual network bandwidth a customer will receive from DSL in the home depends on the span of their telephone wiring. The longer the line, the less bandwidth DSL can support. Likewise, its thickness (wire gauge) can affect performance.

The following chart illustrates the downstream performance of Asymmetric Digital Subscriber Line (ADSL), a popular type of DSL. Downstream bandwidth can be used to load pages into a Web browser or to download files, for example. Data rates are provided in units of kilobytes per second (Kbps) to enable direct comparison with 56 Kbps modems.

Table 2.1. Availability/Range Area.

<b>Cable length (feet)</b>	<b>Bandwidth availability (kbps)</b>
18,000	1,544
16,000	2,048
12,000	6,312
9,000	8,448

As the DSL wire length increases, availability of bandwidth decreases for both upstream (not shown) and downstream traffic. These numbers assume 24-gauge wire; performance decreases significantly if 26-gauge wire exists on the loop.

## 2.6 Streaming Media

### General Information

Video streaming allows the viewer to watch a video file or listen to an audio file of the World Wide Web without waiting for the file to download to the desktop computer. Today there are a variety of videos, meetings, and live performances that are streamed by Mississippi State University. To rescue the user from a long download time of video files, video streaming provides an excellent alternative. The user can begin watching a video or audio file while the file is being set. The file is sent in a gradual continuous stream to the desktop computer. Therefore the file is not downloaded onto the desktop computer. The wait time is limited for video streaming.

### Streaming video

Streaming video is a sequence of “moving images” that are sent in compressed form over the Internet and displayed by the viewer as they arrive. Streaming media is streaming video with sound. With streaming video or streaming media, a Web user does not have to wait to download a large file before seeing the video or hearing the sound. Instead, the media is sent in a continuous stream and is played as it arrives. The user needs a *player*, which is a special program that decompresses and sends video data to the display and audio data to speakers. A player can be either an integral part of a browser or downloaded from the software maker’s Web site.

Major streaming video and streaming media technologies include Real System G2 from Real Network, Microsoft Windows Media Technologies (including its NetShow Services and Theater Server), and VDO. Microsoft's approach uses the standard MPEG compression algorithm for video. The other approaches use proprietary algorithms. (The program that does the compression and decompression is sometimes called the codec.) Microsoft's technology offers streaming audio at up to 96 Kbps and streaming video at up to 8 Mbps (for the NetShow Theater Server). However, for most Web users, the streaming video will be limited to the data rates of the connection (for example, up to 128 Kbps with an ISDN connection). Microsoft's streaming media files are in its Advanced Streaming Format (ASF).

Streaming video is usually sent from prerecorded video files, but can be distributed as part of a live broadcast "feed." In a live broadcast, the video signal is converted into a compressed digital signal and transmitted from a special Web server that is able to do multicast, sending the same file to multiple users at the same time.

#### Streaming

A process in which an application or plug-in can begin playing back the contents of a file before it is fully downloaded. Usually streaming works by downloading an initial portion of the file, known as a buffer, into the user's viewer or player. This application then begins playback of the file while the remainder continues to "fill in."

#### Bandwidth

Refers to the rate or amount of data that can be transferred from one point to another—usually between a Web server and an application such as a Web browser. Because of their size, multimedia files often consume large amounts of available bandwidth. Low bandwidth is a disadvantage in delivering video files over the commodity Internet.

#### Bps/Kbps

Bits per second/kilobits per second. Common units of measurement for data transfer rates. A bit (short for binary digit) is the smallest unit of computer data—a 1 or a zero. A kilobit is 1,024 bits ( $2$  to the  $10^{\text{th}}$  power)

#### Buffered

Data that is collected but held back rather than made available. Similar to a translator on the news listening to a whole statement before telling you what the speaker has said, rather than trying to give you a less accurate, halting, word by word translation.

#### Codec

Compression/decompression algorithm. Programs used to convert and compress analog A/V sources into digital files then decompress them upon playback.

#### Encode

The process of converting media (sound, video, etc.) so it can be streamed to and played by RealPlayer

#### Frame rate/fps

The number of frames per second that a video file displays. A full motion video, like television broadcasting, is 30 frames per second.



## Multicast

Used for broadcasting big events over the Internet. Multicasting allows a single computer to create the content (concert, film, etc.) and many computers to play the same single stream.

## Sampling frequency

The number of times an audio file is quantified, or sampled, in a given period of time. The highest pitch an audio file can produce is exactly half of the sampling rate, so higher frequencies produce better range and thus better quality audio. 22.050 KHz is a common sampling frequency for computer audio files.

## Sure Stream

Optimizes your media experience by shifting between streams encoded at higher and lower bandwidths. If there is heavy Net Traffic, RealPlayer can opt to downshift to a stream that will have fewer problems during playback. Also, if you have a particularly good connection, or if congestion clears on the net, RealPlayer can 'up shift' to a higher quality stream.

## Process of Placing Streaming Media on the Internet 9

### (a) Create/Produce

Create or Produce the media. Some media include videotapes, Real Slideshow, Narrated PowerPoint, and Desktop Camera Presentation. Permission to use copyrighted midi must be received prior to encoding. In some instances, media is streamed live and requires a full broadcast production or use of the interactive video classrooms at MSU.

### (b) Encode/Serve

Encode the media then place the media on a video streaming server. At MSU, the user has two options of encoding the media. Option one is to give the media to Systems & Networks to encode. Option two is for the user to encode the media. Once the media is encoded, Systems & Networks will provide the URL for the streaming media file. The media file resides on a server in Allen Hall.

(c) Play

View the Streaming Media. To view the streaming media, a user must have the URL for the media location, a fast Internet connection and the appropriate software. To view streaming media from MSU, the only plug-in that will work is the RealPlayer.

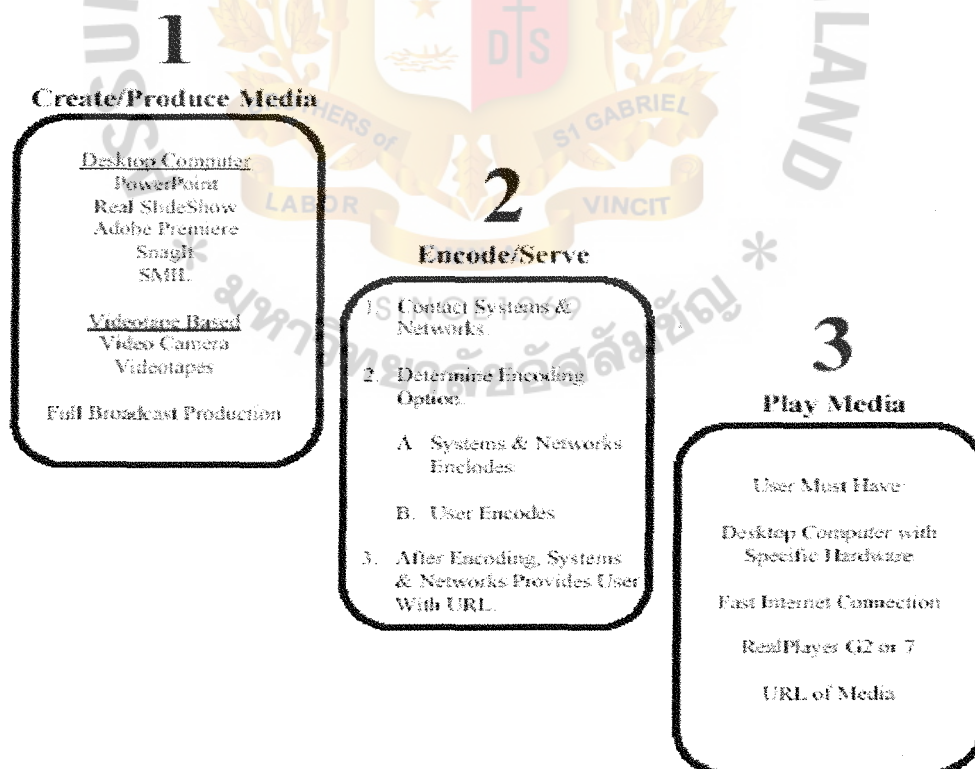


Figure 2.3. Steps for Streaming Media on the Internet.

### III. THE EXISTING SYSTEM

#### 3.1 Business Overview

Spirit production was first operated on October 2003. It was established by a group of people who are interested in the media production. The main part is to edit the movies of ABAC students (advertising major) in the Advertising Media Subject. Most jobs are to capture the media from handycam video camera to put it into our hard disk. After that we rearranged the video files into story and editing making it more interactive.

Our experience in this job made us know how to create good media. But a few months later, Spirit Production Company found out that even though the skills are increased, but the numbers of customers were still not much and the hard copy that we used to promote our shop is not the good way to make people believe in our skills. So we decided to make this web site as another distribution channel to expand our shop, provide benefits for our existing customers and also let the prospective customers know we are existed and from our experience, it may help them in some way as “interactive production”.

Spirit Production wisely plans the business process into step by step to make sure it will give the most benefits to our customers based on reasonable price. The categories below are our main objective to facilitate our customer since our company first operates.

#### Problem Definition

*Inefficient used by the organization*

The company has to carry a lot of paper work or documents such as billing list and some paper documents that we received from our customers as a media requirement and some payment contact and it wastes a lot of space to keep it.

*Inefficient used by customers*

If we don't plan for our website. Then it may take us into trouble such as no visitors or very few of them coming in because of the information that is not updated for a long time and makes them feel bored and never visit again.

*Benefits after Planning*

*Benefits to our company*

- (a) To expand our company's distribution channels to the users world wide.
- (b) To expand our market and increase amount of customers

*Benefits to the member and visitors*

- (a) To use this website as a reference web page about basic design and production.
- (b) To use this web site for the community for asking any information on graphics and design.
- (c) To use this web site as an entertainment channel providing links to other entertainment website.



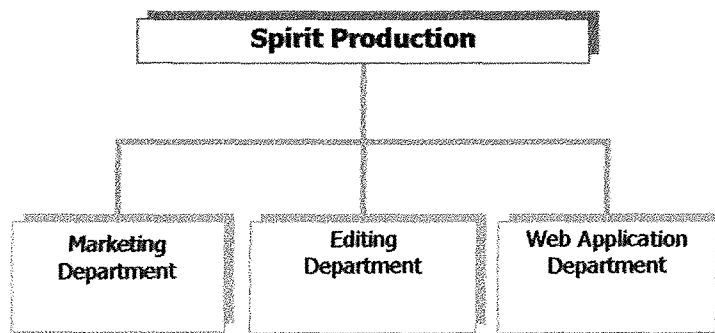


Figure 3.1. Organization Department.

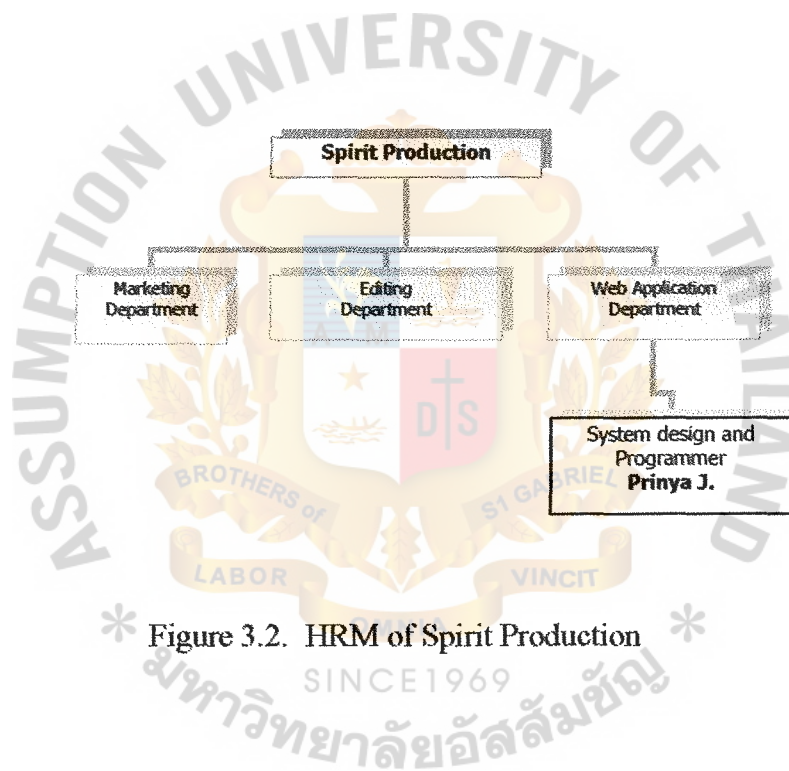


Figure 3.2. HRM of Spirit Production

## IV. THE PROPOSED SYSTEM

### 4.1 System design

For the system design, Spirit Production expands the channel of services via the internet. By creating a website, the company provides a better way for sending the customer product creativity on the web. The customers can post their questions in web board, and then the web master will reply the answer afterward. Customers can contact the company via web board, e-mail, or telephone.

In addition, customer can view the examples of video and media on the web. If they interested in any production and would like to use the service, they can contact the company right a way.

### 4.2 System Specification

The requirements for Divingsports.com system are as follows:

Table 4.1. Server side Hardware Requirement.

CPU *	PENTIUM 4 2.8 Mhz
Ram	1024 MB DDR RAM
VGA Card	ATI Radeon 9600 Pro
Harddisk	160 GB
Internet	ADSL 3 Mbps
CD-Rom Drive	1X or higher
Floppy Disk Drive	1.44 MB
Network Adapter	Realtek Fast Ethernet 10/100
Display	Dual 17" Monitor or higher

Table 4.2. Client side Hardware Requirement (minimum).

CPU	Pentium II 700 Mhz or higher
Ram	64 MB or higher
VGA Card	16 MB VGA Adapter
Harddisk	1 GB
Internet	ADSL 64 Kbps
CD-Rom Drive	1X or higher
Floppy Disk Drive	1.44 MB
Network Adapter	Realtek Fast Ethernet 10/100
Display	14" Monitor or higher

Table 4.3. Software Requirement for web programming part.

Macromedia Dreamweaver MX	Web page and coding
Macromedia Flash MX	Web page design
Adobe Photoshop 7.0	Button and photo design
Microsoft Access	Database Server
Internet Explorer	Run the website
Microsoft Active Server Pages	Application Server
Operating System	Window XP professional edition
Direct X version	7.0 or above

Table 4.4. Software Requirement for production part.

Adobe Photoshop	Editing still image
Adobe premiere pro	Capture movies into batch
Adobe after effect 6.5	Editing movie after caption
Real player, QuickTime, Window	To test the movies in various type
Internet Explorer	Run the website
Adobe Audition	Editing the sound files
Operating System	Window XP professional edition
Direct X version	7.0 or above

Table 4.5. Software Requirement for client.

Internet Explorer	Run the website
Operating System	WIN98 or higher
Direct X version	7.0 or above



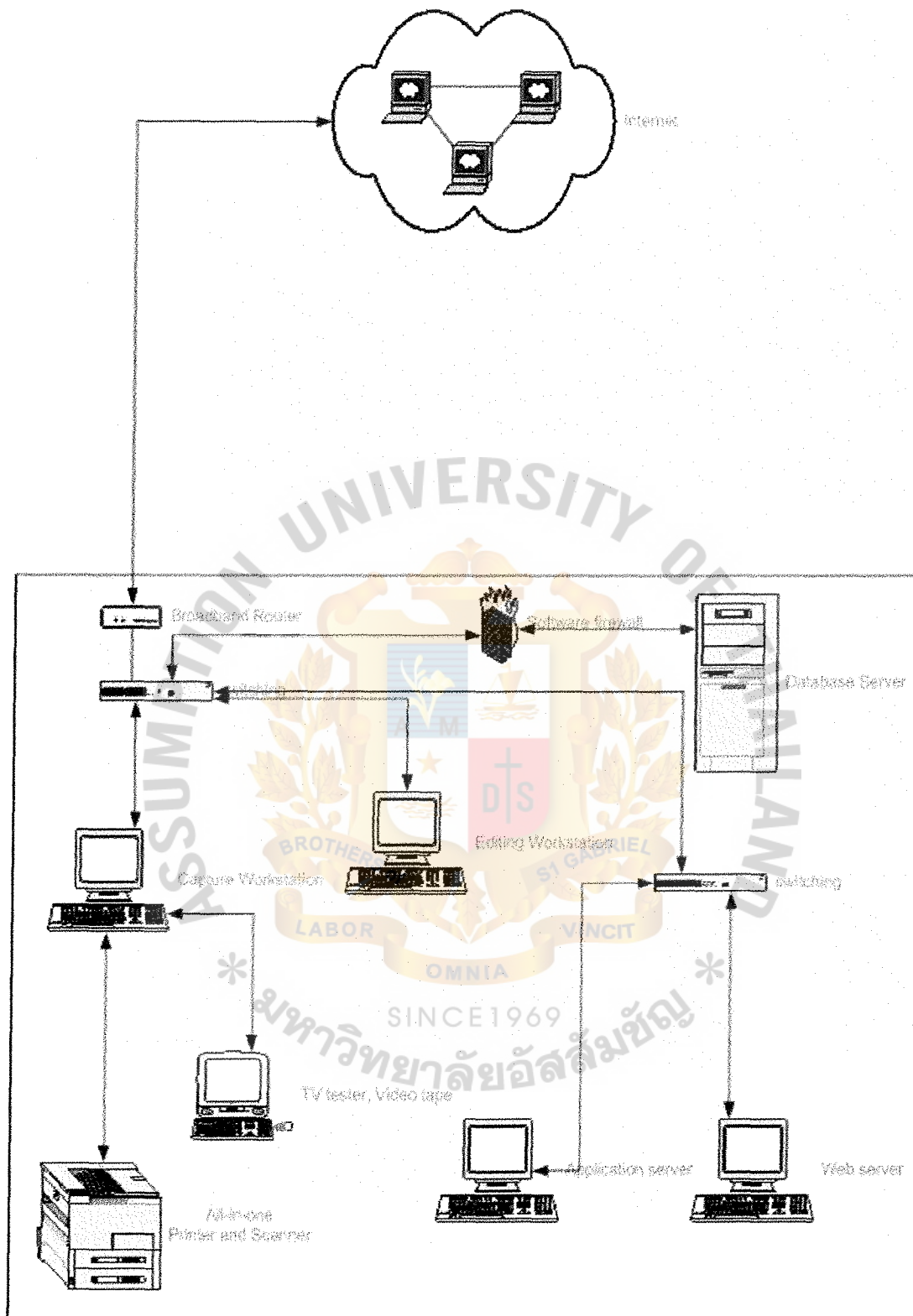


Figure 4.1. Hardware Structure.

## V. MARKETING PLAN

Every business cannot survive without marketing plan which can create the demand from target market. Even though we are the small business but Spirit production is still concerned about how to create awareness from customers and gain the competitive advantages, our marketing plan will provide based on the Internet Marketing Theory that we have learned in ABAC University and it is shown below:

### (1) Critical Success Factors

Every business process must have the plan to achieve their goal, how business can set their goal? It is initially created by critical success factors or question or problems that business has to achieve... such as

- (a) How can we expand our target market and reach to their satisfaction?
- (b) How can we make our website to be more interactive and gain attention of the visitors?
- (c) How can we do to increase demand of the existing customers?
- (d) Does our business gain the competitive advantages in this market?
- (e) If our competitors get more market share, what should we do?

### (2) Target Market

Our target customers are the people who are interesting in the media television and want to create their own idea for many purposes such as educate, leisure, self presentation. But all our process can be done on the web as a service after the customer edit their media with us.

### (3) Market Segmentation

#### *Geographic Segmentation*

- (a) Workers and students who live in the city, mostly in Advertising Media Department.

(a) *Demographic Segmentation*

- (a) Most of them are in the range age of 20-40 (working age)
- (b) Standard Income

(b) *Psychographic Segmentation*

- (a) Interesting in design, presentation and new innovation

(c) *Behavioral Segmentation*

- (a) Most of the time that they spend is on the media such as radio, fashion magazine, television, internet, etc.

(4) Need and Wants

Table5.1. Needs and Wants.

Needs	Wants
Self presentation	We provide better choice of self presenting such as "Interactive resume".
For Leisure	If customer want to make their funny, family video. That's fine because we can make that simple video clip into theme or story for our customer.
Educate	Some student in Advertising Major want to create their own media television, ok we'll make it by editing the film as their requirement.

(5) Values and Costs

## Value

### (a) Product Value

Spirit Production provides the products as a media such as still pictures, sound, video clips and other interactive medial. But most of our work is to capture the file, transform, editing and also output as video files

### (b) Service Value

Service that we provide is to show the media on the web as show reel for the customers as their final product.

Website will provide the web board to contact if the customers want to have more requirements on their project or there are any troubles in their mind

### (c) Image Value

“Spirit Production Your Design Inspires Your Creativity”

The slogan that we use shows the image of our company, it means we produce the media up to individual design that mostly different. So the customer can ensure for their work that create on their own thinking. What we do is to make it real.

### (d) Personal Value

Customers can use the web as medium to present for many purposes such as if they want to present their “interactive resume” they just let others people click on to his/her account in our website and show time...

## Costs

### (a) Time Cost

This website can save time for our customers if they want to contact us, we provide much choice for them such as using our website e-mail to contact admin or use the web board.



(b) Energy Cost

Many customers used to spend much energy to go to many studios and pay a lot of money for their work. Just click into our web and then deal about the cost.

(c) Monetary Cost

We provide more choice at a reasonable price for our media. Customers don't have to pay a lot for small work.

(d) Psychic Cost

Customers can make sure before they give an order to us by looking at our work on the first page of this website. If the quality of work is good, we can make a deal.

(6) Marketing Mix (4Ps)

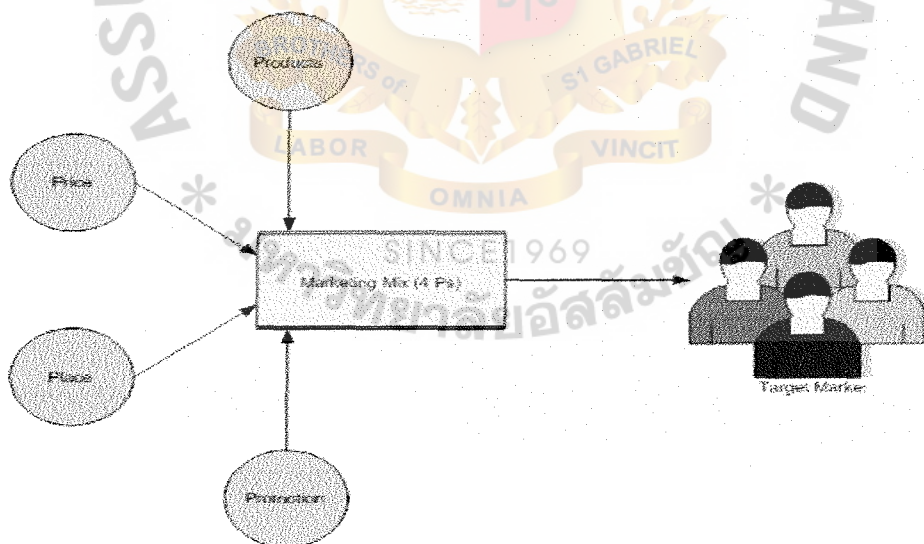


Figure 5.1. Marketing Mix.

(a) Product

- (a) We provide the products in the form of media or video clips and record it into the CD as our final products.
- (b) We guarantee the service of that CD by keep the media files of our customer for a period of time such as one month, after that delete it. So the customer can ensure about the quality of our work.
- (c) Production type that we provide such as
  - (1) Music video
  - (2) Clip Movies
  - (3) Graphics
- (d) Media quality we divided into 3 parts
  - (1) Full
  - (2) Half
  - (3) Quarter

#### Product positioning and product Differentiate

We look at the quality of our work until it is finished to make sure that our customer will be satisfied. Even though we are not a brand name studio, we can this point position our product as high quality products

Our product differs not just in the quality of work but we provide additional services such as to post the media of our customers into our website as reels in order to promote our customers work and promote our shop.

#### (b) Price

We set the price based on working hours that we start until we finished the project at the rate of 450 baht/ hr. The price that we set is lower than the market price most shops offer, in order to compete with the price with higher quality.

(c) Place

(a) Spirit Production provide information in the website as one channel of distribution

(b) Store front And also we use the “word of mouth” from our existing customers to gain more income

(c) Distribution of the product Our customers can either come to our shop and take the final project in the form of CD-ROM and make a payment in our store or they can let us send it through EMS after we received the payment.

(d) Promotion

Sale promotion

For promotion that we use for this seasons, if the customers finish their work with us we will post his/her 1 media on our website for 1 month Free of charge and the promotion period finishes at the end of this year.

Online strategies

Also we provide available information through the website such as member services to provide the news and events to inform them through their e-mail.

Competitive Advantage on situation analysis

The way we can make our business gain more differentiate and make benefits over our competitors. In this business even though the number of competitors are not too high ( because the setup cost is very high as a barrier to entry) but we still have to gain more trust from our customers and we divide it into 2 parts.

Online competitors

For online business there are many websites like ours but they just take the media from famous sources such as GMM and other web links.

### *Strengths*

(a) Advertising

We can make our customers feel familiar with our website by providing the web link exchange to other web sites, some may have to pay and some may not.

(b) Simple design

The design has to be simple not to be exciting for users because they want to find just what they want.

(c) Make an order

Make customers know about our product quality if it can reach their satisfaction they will come and make an order, if not this may be goodbye.

### *Weakness*

(a) Conflict with distribution channel

The customers don't know our company well, so it is difficult to gain trust from them at the first time.

(b) No online support

Sometimes we have to update the web site so it is difficult to make it available at that period of time.

(c) Security

No web sites can provide 100% security online.

### *Off line competitors*

There are many offline competitors as well. Even though it is not high as online in this business but we have to be concerned and look after our competitor as well.



*Strengths*

(a) Awareness

Customers are aware of our name but it is still a small group, so we have to use the website as an other channel of distribution.

(b) Look and feel of the place

Our company provides a look and feel of comfortable environment that makes our customers feel comfortable with.

(c) Various types of product

Our product type or program can support various kinds of customer base on the work that they take and the theme that they wish it to be.

(d) Security

Our place makes customer feel secure about their money that they spend on the projects, to make sure that we are existing and available all the time if they get into trouble with the media.

*Weakness*

(a) Traffic problem

Even though we provide a good place for our customers our company is still just a small business so we cannot provide much parking for our customers. And sometime they have to spend time to take their projects from our company.

(b) Availability

As the stores have their own opening and closing hours with fixed timings, it's not 24/7 which may be inconvenient for some of our customers.

(7) **SWOT Analysis <e-commerce>**

Table 5.2. S W O T Analysis provide by our website.

Internal factors External Factors	Strength (S)	Weakness (S)
	SO Strategies Generate strategies here that use strengths to take advantage of opportunities	WO strategies Generate strategies here that take advantage of opportunities by overcoming weakness
	ST Strategies Generate strategies here that use strengths to avoid threats	WT Strategies Generate strategies here that minimize weakness and avoid threats

**Strength**

- Various types of Medias for the customer to choose when contact to our shop.
- Strong sales promotion program to gain the attention of the customer.
- Different types of media means different theme of work, our company set the program to provide reasonable price for them.
- Save cost of transaction, transportation when contact our shop.

**Weakness**

- Limited investment because we are just small business. So we just invest limited amount to provide service as much as we can.
- Limited employees to provide for high quantity of work.

### *Opportunities*

- (a) Thai government supports the way to do the business by providing the information and some guidance as the new business entrepreneur.
- (b) Thai people are interesting and easy to buy the new innovation products.
- (c) The new business means there is less amount of competitors
- (d) Make the owner of the business feel alert to make good quality of products to reach the standard.

### *Threats*

- (a) Customers don't trust the quality of work before they want us to do the media.
- (b) High cost of investment for the business.
- (c) Each production cost will be useless

## VI. FINANCIAL AND BREAK-EVEN ANALYSIS

Table 6.1. Cost Analysis.

Cost (initial cost)		Yearly Cost	
Capture workstation	80,000	Monthly salary 4 persons	864,000
Editing workstation	80,000	<b>Yearly maintenance</b>	
Application Server	50,000	Office equipment	5,000
Database Server	50,000	Computer system	50,000
Web Server	50,000	Utilities payment	30,000
All-in-one printer/scanner	20,000	Other expenses	10,000
Hub/switching	5,000		
TV+VDO	20,000		
Network setup	20,000		
Office equipment	20,000		
<b>Total</b>	<b>395,000</b>	<b>Total</b>	<b>661,000</b>

Table 6.2. Minimum Revenue Forecast.

Editing/Capture(450baht*6 hrs*5days*4weeks)	<b>54,000</b>
Web posting service (1,000*5days*4weeks)	<b>20,000</b>
Banner advertising (5,000*3)	<b>15,000</b>



Table 6.3. Break-even Analysis.

	2004	2005	2006
System Setup Cost	395,000	55,000	55,000
Operating Cost	949,000	980,000	950,000
Cummulative Expense	1,344,000	2,379,000	3,384,000
Revenue	1,308,000	822,000	1,200,000
Cummulative Revenue	1,308,000	2,130,000	3,608,000

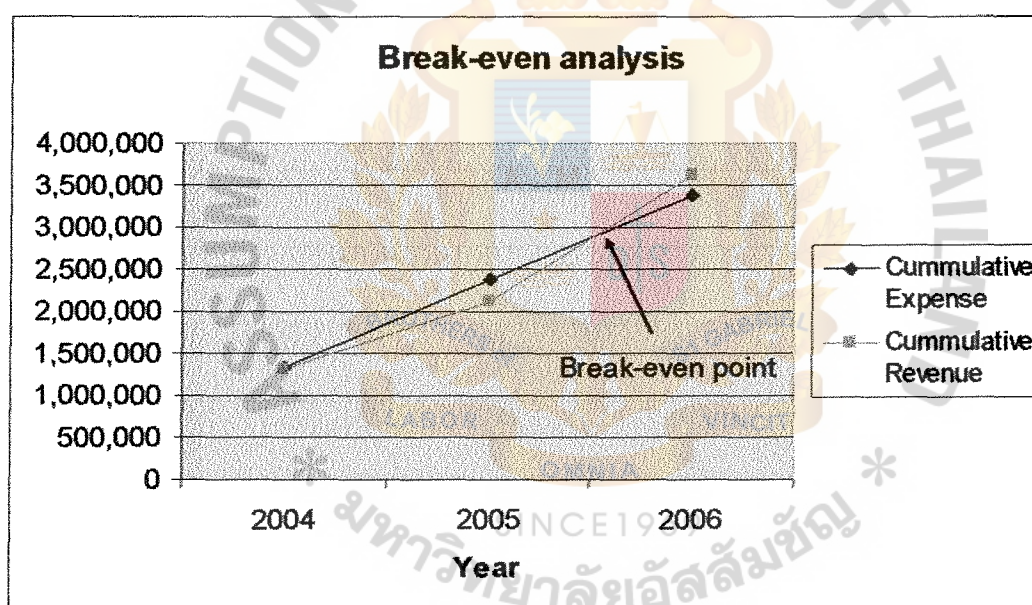


Figure 6.1. Break-even Diagram.

Figure 6.1 shows the break-even point which spirit production achieve the optimum point with in the second year period, therefore the revenue of the company slightly increasing while the cost of production remain the same.

## VII. PROJECT DESIGN AND IMPLEMENTATION

### 7.1 Web Color schemes <Web design>

In this part, we emphasize on the concept that we have learned in the “Web Design” Subjects. We apply the color design of this website with the concept of “color harmony scheme”. We use monochromatic color scheme or use the same tone color because this website may be need the design and need more color but it is just the products. We need this website to make people look and feel “clean website”.

The color that we mostly use for this web is bright tone color such as white, gray, and light blue. But there may be some more additional color more than this such as text of this website we use blue because it look contrast with the white background but not too shiny as red. Below is the design of this website.

Top for create the web banner		
General Links	Main part	Link and some advertising
Footer		

Figure 7.1. Website design.

## 7.2 Develop a Site Navigation System <Web design>

Now it's time to lay the menu on the website, it is very important with a good navigation system. One of the chief complaints that visitors have is that they can't find the content they're looking for. The larger the site, the more important redundant navigation systems are.

- (a) Left-side menu lists the various sections of your site, and perhaps some of the subsections, too.
- (b) Search the site or the product database. Larger sites need a search feature so visitors don't get lost.
- (c) View today's specials or recent news and events releases.
- (d) Links provide hypertext links to other sectional pages.
- (e) Site map shows the structure and has links to every page (or sectional page).

## 7.3 Build Basic Webpage Templates <Web design>

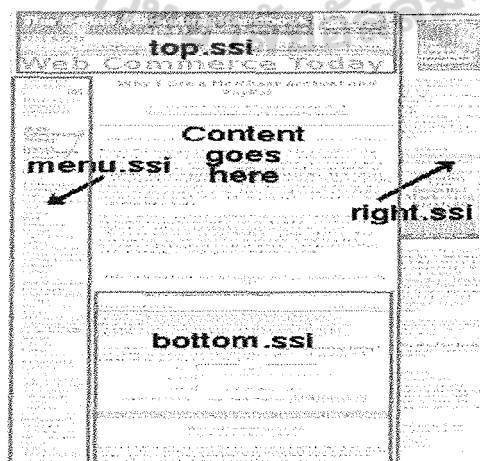


Figure 7.2. Web examples.

Take a look at the sample webpage. It shows the contents surrounded by four sections, each of which is shown when a web browser comes to the webpage:

- (a) Top -- inserts the masthead graphic, a banner ad, and some of the "tabs" navigation system at the top of the page. This is a separate file, called "top" that is inserted at the top.
- (b) Menu -- inserts the complex left-side menu plus a database search feature.
- (c) Bottom-- inserts a subscription form for my newsletter, plus more navigation links, copyright and trademark information.
- (d) Right -- Insert the additional frames such as tips of the days or pictures to gain attention to the users that user website are changing.

Modern websites control the font sizes and colors using Cascading Style Sheets (CSS). When you change the font size on a single master CSS file, it changes the fonts and colors in *all* your WebPages.



### 7.3 Site Map

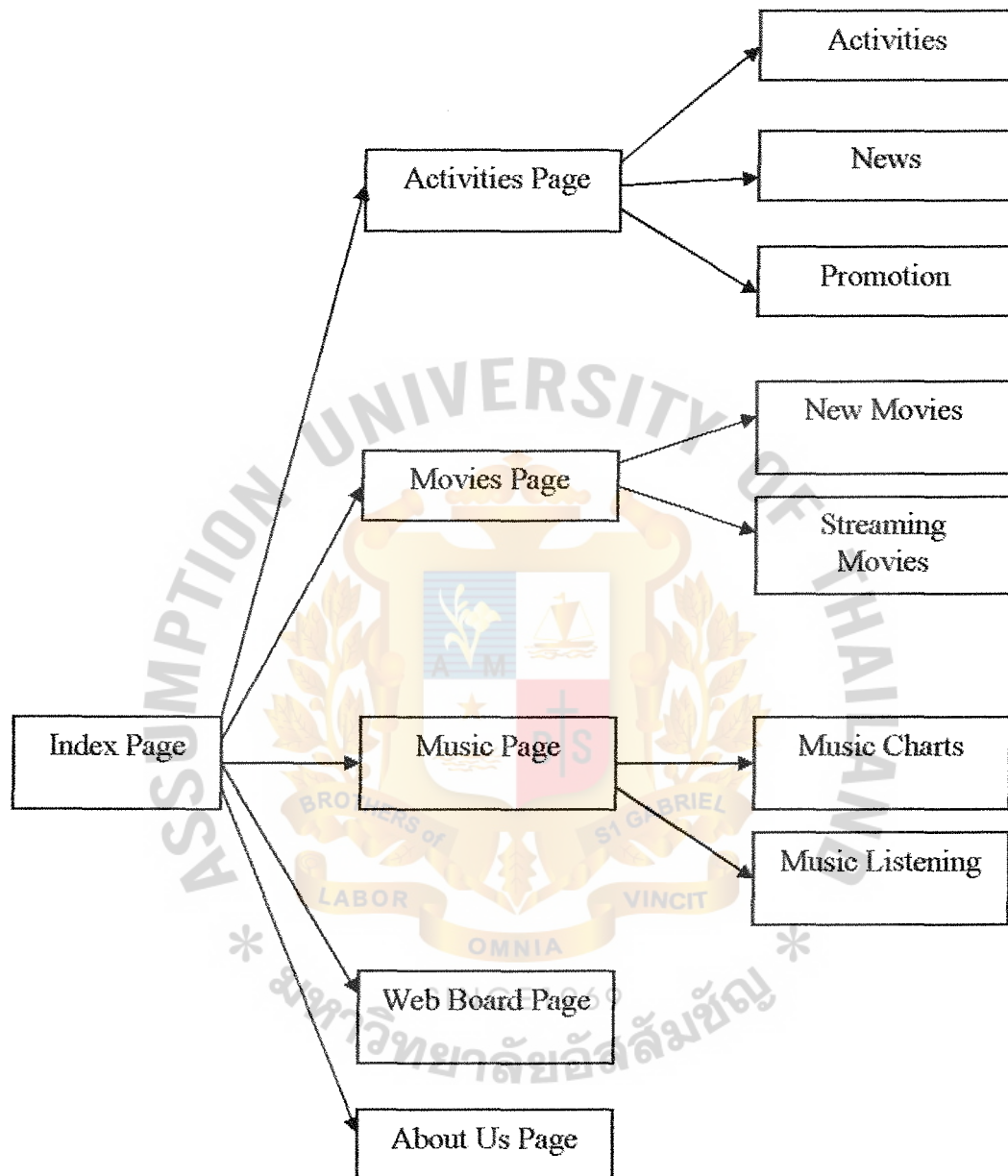


Figure 7.3. Site map.

## **VIII. CONCLUSION AND RECOMMENDATIONS**

### **8.1 Conclusion**

Even though Internet technology makes us finding the information easier than before the web programmers still have to check whatever that can improve their website, who get that information faster than others will win the match, that's the way to do the business. If the website is not interesting and doesn't have good plans, the results will be useless for the project teams.

From the report, Spirit Production can guarantee the quality of this project by using critical success factor, SWOT analysis, marketing analysis, and financial analysis to make sure that it can be real with the result that the company can gain more revenue and make the break-even point within June 2005.

Web Design of Spirit Production is implemented through ASP and Macromedia Dreamweaver MX with the database. The company website is developed to expand other distribution channels of the company to provide the sample media via the website, so customers can access through the website anywhere, anytime they want.

Anyway, we find out that most of the visitors may have some experience with these kinds of websites. Up to this point we can make sure that Spirit Production can be the better choice for our customers to provide the way of making the interactive web site with reasonable cost and also it can satisfy to the needs of our customers.

### **8.2 Recommendations**

The good point we get from creating this website is that we can create a good relationship with customers and from this point it can create brand royalty. Also customers can contact other customers though the web boards which can create a big community.

But what drives this website is the information that needs to be updated all the time, so the company's web programmer teams decide to provide the challenges and win prizes from websites in the near future. The prizes may be not too much but it can make a good relationship with our customers as the website's activities and to show that Thai people have good ideas and designs.







## DATABASE DESIGN

This web application system is designed using relational database model that is a modern relational database management system which organizes and views all data in the form of tables or relations, provides powerful operation (such as in corporate with Access) to manipulate data stored in the relations, and specify business rules that maintain the integrity of data when they are manipulated (McFadden, Hoffer & Prescott 1999: 204).

Each column of a table represents an attribute or characteristic of an entity. Each row of a table represents as instance of the entity. An important property of the relational model is that it represents logical relationships between entities by values stored in the columns of the corresponding tables.

Using logical database design also helps in transforming the conceptual data model (E-R diagram) to a logical data model (relational database). It represents entities as a relation and sets the identifier of the entity as primary key of the relation in order to be unique and single value in each row and some non-key attribute of the relation as foreign key to link between two relations. Then, it represents relationships and normalizes or refines the relations to avoid the problems of redundancy data and errors or inconsistencies when updating table that contains redundant data. Finally, it will merge the relations in order to minimize the redundancy of data (Coronel 1997: 157).

For this web application system, there are following five tables or relations (Refer to Appendix A. for Database Design):

- (1) Web board-Question Table: store the information of each question of the web board that will included question Id, topic, question message, question name, question date/time, question read, answer date/time and answer count.
- (2) Web board-Answer Table: store the information of the answers of each topic such as answer Id, answer name, answer message, and answer date/time.



Table A.1. Web Board Question Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign key to table	Key Type
1	QuesId	int(10)	Y	Y		Webboard-Answer	Primary Key
2	QuesTopic	varchar(50)					Attribute
3	QuesMessage	varchar(...)					Attribute
4	QuesRead	varchar(10)					Attribute
5	QuesName	varchar(30)					Attribute
6	QuesDate/Time	Date/Time					Attribute
7	AnswerDate/Time	Date/Time					Attribute
8	AnswerCount	Date/Time					Attribute

Table A.2. Web Board Answer Table.

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign key to table	Key Type
1	AnsId	int(10)	Y	Y			Primary Key
2	AnsName	varchar(30)					Attribute
3	AnsMessage	varchar(...)					Attribute
4	AnsDate/Time	Date/Time					Attribute

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