Online-Inventories System

by

Ms. Benjamas Karnkasem

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

November 2003

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Project Title	Inventories-Online
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Academic Year	November 2003

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

BKK Bank has an operation manuals for inventories ordering. Every week, the division/branch must share time to working its. In BKK Bank's experience, the steps of inventories ordering are complicated and wastes time. BKK Bank should change manual working to online working.

The reasons of creating "Online-Inventories System" are usinging the intranet web-based as part of internal information strategy is simply that it is fast, it works, it is user-friendly and it is easy to widen their distribution (just add a PC). And, as presented in this document, it save companies large sums of money. By using common Intranet protocols, or core technologies, in conjunction with their own business applications, firms can easily communicate, distribute information and facilitate project collaboration across the entire enterprise. And, the big reasons are adapt my project can be used in BKK Bank.

In this report, the scope of work is separated into 3 phases, first the initial application concerned only with quality control works. The reason that the author started with this function is because the nature of this works is papers that can significantly improve productivity. The second is preliminary Intranet (on development application) that extends the scope of Intranet to every function and the last is future plan that BKK Bank plan to develop database more efficiency and comfortable applications to serve the needs of user.

This project provides all details for BKK Bank. These started from the literature review, Intranet example, financial analysis, web development and web design. It also includes the future plan for future work.

ACKNOWLEDGEMENTS

In order to complete the project, I would like to acknowledge my gratitude to several people who are important parts in this project.

I would like to thank Dr.Settapong Malisuwan for his valuable time, support, advice and comment given in the completion of this project.

I would also like to thank my boss and my colleagues who pressured me to decide to study for a Master's Degree at Assumption University.

Finally, last but certainly not least, a big thanks to my family for trying to help me in everything especially with so much encouragement.

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I. INTRODUCTION

1.1 Background of the Project

Nowadays, the majority of big companies have many branches use company Intranet Website to share information internally, training, etc. It will help the connection between branches and head office easier. Moreover, it will reduce the process of working for officers and save time.

Everyday, each branch's officer has a routine job but they must also work or some extra jobs such as order some stationery from the inventory center. The flowchart of this process is as follows:

(1) Metropolitan Branch and Provincial Branch fill the standard form and sending it to Inventory center in Head Office (H.O.)

(2) The Inventory center records the branch's ordering for debit the quarterly expense and sent the standard form to Warehouse

(3) The Warehouse records the volume of stationery for debiting the stock and distribute inventory to each department/branch.

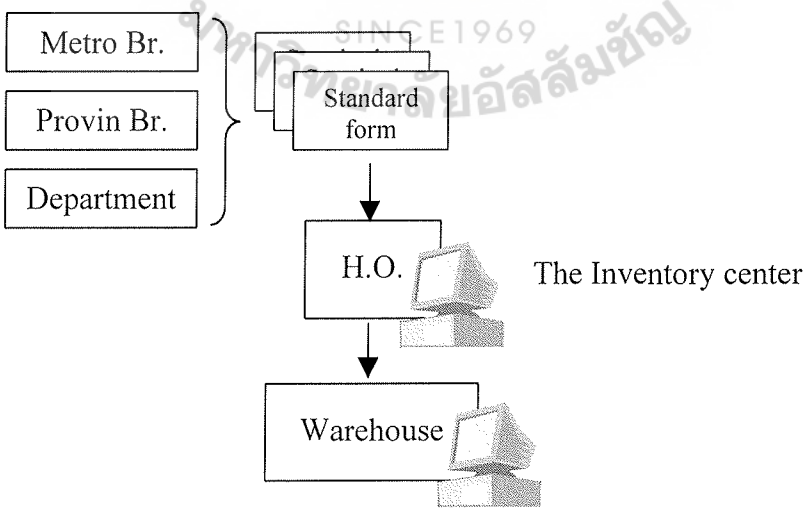

Figure 1.1. Process of Inventories Ordering.

The purpose of creating "Online-Inventories System" is to change the process of ordering inventories as manual working to online ordering via company Intranet Website. It can also increase the efficiency of working and reduce some costs for the company that would like to survive in the competitive world.

1.2 Objectives

(1) To apply the concepts learnt in the Master of Science in Internet and E-Commerce Technology courses.

(2) To provide convenience to the officers to preview, select and draw the inventories via company Intranet.

(3) To reduce the risk of loss of form while it sends to the inventory center.

(4) To reduce the cost of logistics.

(5) To provide convenience to check stock in warehouse and easy to manage stock.

(6) To adapt 'the Online-Inventories System' project for use in my company.

(7) To design and develop the Intranet web site effectively allowing users to find information of inventories easily.

1.3 Scope

Creating The BKK Bank Intranet Website by using HTML, VB Script and ASP called "Inventories- Online"

1.4 Deliverables

(1) Website Code (Java, HTML, VB Script, ASP)

(2) A project report

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1.5 Project Plan (Include Gantt Chart)

No.	Project Description	April	May	June	July	August	September	October	November
1.	Proposal Submission								
2.	Data Collection								
3.	Web Design & Development								
4.	Web Testing								
5.	Finalize Report								
6.	Project submission								
7.	Defense								

Figure 1.2. Gantt Chart.

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II. LITERATURE REVIEW

2.1 What Is Intranet?

Almost every organization has massive amounts of information that needs to be stored or accessed on a daily basis. With the expanding use of Internet based technologies within corporate networks, users are now able to access needed information quicker and more efficiently. By communicating through the Intranet, members of a group can share information better, hear news quickly, and easily find key documents and other crucial information. Following this will be a brief description of what Intranet is.

An Intranet is the use of Internet technologies within an organization (or company) to achieve better results than the conventional means of data access and transfer. Intranet helps in cutting costs, easy, and fast accessibility of day to day information. The difference between an Intranet and the Internet is that the Intranet is the Internet within an organization whereas Internet pertains to the world. Also, Intranet has access to Internet but not vice-versa.

(1) A network connecting an affiliated set of clients using standard internet protocols, esp. TCP/IP and HTTP.

(2) An IP-based network of nodes behind a firewall, or behind several firewalls connected by secure, possibly virtual, networks.

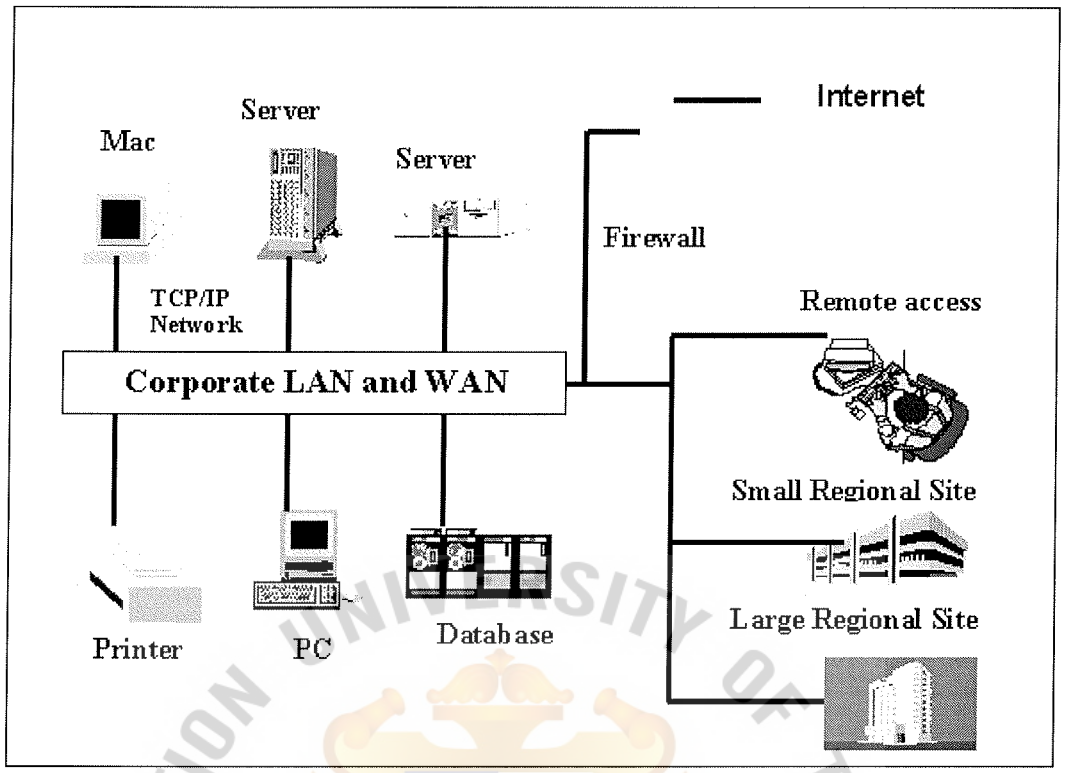

Figure 2.1. A Typical Intranet.

From a technical perspective, "An intranet is a private corporate or educational network that uses the Internet's TCP/IP protocol for its underlying transport" . To protect sensitive company information and ensure that hackers do not gain access, a security barrier called a firewall is used. Firewalls block unwanted outsiders from entry to the intranet but allow people within the intranet to access resources on the Internet

An intranet often comprises many different networks, known as subnets, inside an organization and TCP/IP allows them all to communicate with each other. The transmission Control Protocol (TCP) and Internet Protocol (IP) are at the heart of intranet technology. Together they are known as TCP/IP and although they are separate protocols, they are tightly woven together to provide for the most efficient communications. When information is sent across the intranet, TCP divides the data into small packets of less than 1500 characters and calculates a checksum identifying

the exact amount of data in each packet. The data packets are then placed in IP wrappers or envelopes, which use addressing information to detail the exact destination of the data on the intranet or Internet. The packets, in their IP envelopes, are independently sent through a series of switches called routers. The routers determine the most efficient travel path for sending each packet to its destination based on traffic load and router availability. After arrival at their destination, TCP again calculates a checksum and compares it with the checksum that has been sent with the packet to verify that the data has not been corrupted during transmission. If a corrupted packet is received, TCP requests that the original packet be resent. TCP also has the ability to verify that all packets have been received. When all packets have been received, using the header information to determine the packet sequence, TCP reassembles the data into its original form for use by the destination computer .

Since their underlying TCP/IP architecture is identical to the Internet, intranets are vulnerable to attacks from unwanted outsiders. Firewalls are used to protect intranets and confidential company information from any attacks launched against them from the Internet. Dependant on time, money, and resources, many kinds of firewalls can be built using many combinations of hardware and software, but most are built using only a few elements with servers and routers being the primary components. Most firewalls use packet filtering, which uses a filtering router to look at each packet traveling between the intranet and the Internet. Filtering routers use a filtering table containing the rules established by a network administrator to make decisions about which packets should be allowed access or dropped.

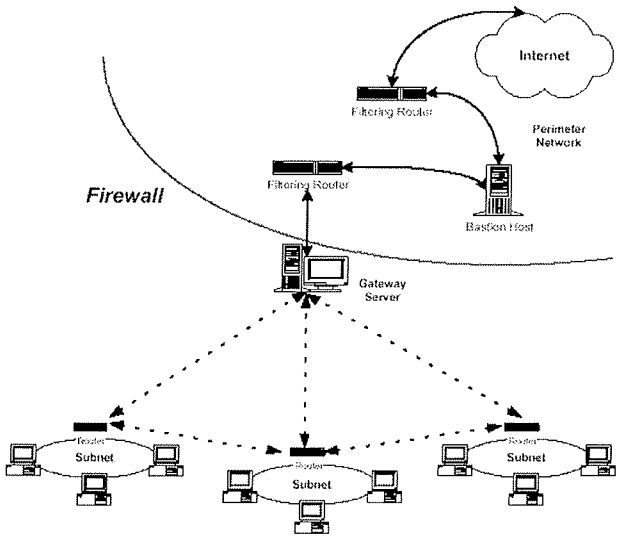

Figure 2.2. The Possible Path of TCP/IP Packet Traffic Within and Outside an Intranet.

2.2 What Is an "Internal Web"? A Corporate Web?

In general, a web is an **unstructured client/server network** that uses HTTP as its transaction protocol. The World Wide Web comprises all HTTP nodes on the public Internet. An **internal web** comprises all HTTP nodes on a private network, such as an organization 's LAN or WAN. If the organization is a corporation, the internal web is also a **corporate web**.

If a corporate web connects two or more trading partners, it is often referred to as a **business-to-business web**, or an extranet.

Nomenclature: Throughout *Intranet Journal* the convention is used that the first letter of the word "Web" is **capitalized** only when referring to the World Wide Web. Webs on private networks are referred to as "webs," with a lowercase "w"

2.3 How Big Can an Intranet Be?

As big as a **community of interest**. Scale is an important factor in web implementation, but it has no bearing on the **logical association of clients** that make up an intranet. For example, a workgroup with one web server, a company with several hundred web servers, and a professional organization with ten thousand web servers can each be considered an intranet.

While nothing constrains these webs to be "inside" or bounded in any physical sense, size is a significant from a network design perspective. *Intranet Journal* refers to expansive private webs **wide-area intranets** or **extranets** to connote that WAN economics and technologies apply.

2.4 How Do Intranets Relate to Groupware?

Groupware, a term coined by marketeers around 1995 to mean "software that facilitiates group work," never emerged as a well-defined software category. Today the term is used less and tends to be narrowly identified with three products: *Lotus Notes*, *Microsoft Exchange* and *Novell GroupWise.*

Groupware functionality is roughly synonomous with **collaborative computing** and embraces the following:

(1) Document Sharing

(2) Collaborative Authoring

(3) Versioning

(4) Messaging

(5) Secure Access

(6) Search/Retrieval

(7) Discussion Forums

(8) Database Integration.

Intranet technology is well-suited to many of these tasks, having matured in areas where it was initially weak, such as **security and integrated search**. The major groupware products have shifted from their early proprietary roots to **internet-based architectures**. For instance, Microsoft Exchange 5.5 supports POP3 and IMAP4 Internet mail, NNTP-based newsgroups, and LDAP directory services

2.5 Advantages and Benefit of Intranet Publishing

Advantages

There are many advantages in adopting the Intranet to a company. Several reasons why companies are adopting the web as part of their internal information strategy are:

(1) Access to information: web servers are fairly easy to set up, and companies are finding the web an easy way to distribute information.

(2) Platform independence: because there are browsers on every major platform developers no longer need to worry about cross-platform client development.

(3) Multiple data types: developers can easily provide access to multimedia as well as textual information

Benefits

(1) Reduce printing costs.

(2) Real-time audio and video communication.

(3) Information publishing and sharing

(4) Navigation and full-text indexing and searching.

(5) Directories of people and things.

(6) Email

(7) GroupWare and team collaboration.

(8) Targeted audiences.

(9) Information on demand.

(10) Single information interface.

(11) Platform independent information.

(12) Scalable to 1000s of network users.

(13) Document management

(14) Training

(15) Workflow

(16) Databases and other bespoke systems

(17) Discussion

2.6 User Services

Information Sharing and Management

The intranet provides painless, transparent network-wide content publishing and management, ensuring that everyone with access rights have the latest information from anywhere on the network. HTML documents can be created using drag-and-drop interfaces, document formats such as word processing documents and spreadsheets can be easily published. Documents are indexed and organized as they are published, and can be managed from the desktop, within the department, and centrally in one location. The result is a single, seamless environment for all information throughout the company.

Navigation

The Intranet makes it easy to find any piece of information or resource located on the network. Users can execute a single query that results in an organized list of all matching information across all servers throughout the enterprise and onto the Internet. Access control allows only authorized users to have any level of access to restricted documents. Consequently, all users have comprehensive and personalized access to all-important information across both their internal network and the Internet.

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Communication and Collaboration

Access control and security allow both email and discussion groups to be private, with all parties authenticated across the network. Email and discussion groups can be distributed across systems or taken offline for disconnected use. Users can look up email addresses, security keys, and internet phone numbers by using a simple address book interface tied into an open directory service across the internet.

Directory

Directory services track and manage information about people, access control, server configuration, and application-specific resources. End users can discover information about people, including email addresses, security keys, and phone numbers. The administrator is able to enter his/her access control privileges and personal information once, with the information available for any user or server on the network, across all applications and platforms.

Security

The Intranet security services provide ways for resources to be protected against unauthorized users, for communication to be encrypted and authenticated, and for the integrity of information to be verified. Email and real-time communication can be secured, with each party authenticated and with message traffic encrypted. Corporations can issue and manage a security key infrastructure to give their employees the ability to conduct company business securely across the network.

2.7 Assess

Step 1 Assess Role and Usage of Intranet

There are many different levels on which companies make use of their intranets. Because companies seldom start at any one place in the diagram, nor mature smoothly through the continuum, it would be misleading to use the map as a timeline from which

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to project future growth. However, it is both possible and important to determine the current location of each company within the spectrum, and to take careful note of the distance between those points. With a possible range of intranet use –from static information provider through complex business process facilitation –companies that do not fall close together are going to require more work to unify the intranet culture.

Step 2: Assess Intranet Governance

How is each intranet managed and funded? And by whom? Is the IT department or are individual business units responsible for content and application development? Does an executive committee decide what look-and-feel should be adopted for all business units? When used most effectively, an intranet can provide access to a company's most significant assets and resources, and decisions regarding allocation, planning and management are integral to maintaining a competitive advantage. Intranet governance, or the model by which an intranet is run, is the obvious next characteristic that must be assessed before merging these two disparate structures. Because the key roles in a governance model includes everything from funding mechanisms to business planning to look and feel and content management, it is often closely aligned with corporate culture. Companies fostering independence among business units may have a very decentralized governance model. The site may be inconsistent and may use multiple administrative processes but still reflect the best interests of the individual unit. Companies with a top - down culture may present intranets that are consistent across the site and have unified administrative and publishing processes, but publishing under this model might be a chore because of centralized content approval requirements.

Culture alone does not determine governance. As an intranet moves along the usage spectrum above, governance needs also evolve. Before we can plan for motion along the continuum, we need a starting place. Thus, as a second step to our pre-design

process, we assess the points at which each company falls on the spectrum between centralized and decentralized governance models. Critical to this step is noting which features of each company's model should be preserved, and which can be sacrificed. Similarly, dramatic differences should be analyzed so that special actions can be taken to mitigate potentially disruptive changes.

Step 3: Inventory Sites

The third and final step of the assessment phase is to complete an inventory of both intranets. This is perhaps the most obvious step, but sometimes the loss of the simplest thing, like one company's favorite site carrying nothing more than the lunch specials at the local cafeteria, is enough to make employees feel unimportant. The inventory should include an assessment of how each site is used and who its primary users are (if usage statistics are not available, this is an important factor in considering how an intranet may be better benchmarked and managed). This inventory should be based on interviews with typical business users, who provide an important context for inventory information. Other issues to be inventoried include: content area, administrative and content management processes, navigation issues, functionality, taxonomies and technical maintenance processes. Special note should be made of potential commonality and potential divergence between the two sites with particular attention paid to cultural hotspots.

Implementation

Step 4: Establish Shared Governance

From the assessment phase, a clear profile of the separate intranets will emerge. However, even taking the best characteristics from both worlds, and taking care to fold in future goals, will provide only part of the picture of an intranet's new governance needs. Because corporate culture as well as intranet functionality contributes to the

model of governance, it is necessary to determine what the mutual cultural goals for the company will be. Does one company foster independence while the other governs with an iron fist? Do both companies execute from the top down, yet want to commit to such a broad intranet plan that centralized governance is impossible? These are the types of questions need to be asked before working out a governance model.

Finally, once the general culture and intranet plans are set, and a unified vision is created, defining governance becomes methodical. There is no single governance solution to a large corporate intranet. Instead, we break intranet governance into multiple business roles and assign a solution to each role. The composite then becomes our governance model. The governance sidebar shows the key roles to be considered and an example model. Though these steps are aimed at merging companies looking to smooth their inevitable transitions, companies looking to upgrade their intranets from a haphazard collection of sites or documents into a unified business environment can take away something from this lesson as well. Identifying and establishing the proper governance for your intranet goes a long way toward the rapid realization of any return on investment expected from such an endeavor. For merging companies, the unified vision of intranet growth must be articulated quickly to avoid unnecessary culture clashes and the institutionalization of legacy approaches that could slow the merger process. Changing management will be critical, as the way in which the intranet is governed will be one of the most obvious internal representations of the new culture and company. Laurence notes, "Creating a merged intranet was a top priority for us. We successfully launched a new site on our first day of operation, and the work continues.

The intranet is never 'finished.' despite the challenges, this is a great project for dot companies about to merge because you learn a lot from each other. "Employees had grown accustomed to using their old intranets in a certain way and change was not

always welcomed. We all had to look at things differently and accept what worked well in the past may not be the best solution for going forward. It's a daunting task, but launching a merged intranet is an opportunity to build something that reflects the tremendous capabilities of a brand new global company and its employees." And, so far it has been a huge success. The creation of a new intranet for merging companies may be a challenge, but it is also an opportunity to create a positive environment for a newly created company.

2.8 Ideas and Opinions

I feel that in the next few years almost everybody will have computers in their homes. Nowadays computers are not just for computer wizards, it is also for common families. It will become an essential appliance in one's home. With the introduction of Java, even the simplest appliances such as a toaster can be networked centrally. In the near future, many families will rely on the computer to do their everyday tasks. For example, many people can use PC Banking to do all of their banking transactions. This service is provided by the major banking companies like Citibank. http://www.citibank.com. People can do grocery shopping from home via Internet capable smart phones. People can have secure access to all types of information ranging from the local TV listings to secure personal records.

In future years, the computer industry will progress towards a complete user-friendly system. Currently, a new user can not be told to just sit in front of a computer and be productive. With advanced user interfaces, this task can be accomplished. These interfaces will have to incorporate adaptive programming. For example, one of the upcoming products such as the Barney doll made by Microsoft can adapt to a child by use of multiple sensors in which these sensors are located throughout the doll. It also has an extensive vocabulary of over a thousand words.

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The World Wide Web is such a powerful tool but because it is so broad and filled with infinite information, people can not find quality information. For example, I recently searched for a simple topic (Internet) through Alta vista http://altavista.digital.com and it gave me an incredible amount of unnecessary information that was not needed. It actually produced over 12 million matches. This was very impossible for me to accomplish anything. Instead of it being a tool, it became an annoyance.

One of the main problems of the World Wide Web is the inability to deny access to the "so-called" adult content pages. A possible solution to this problem would be the implementation of a global secure Internet account. This account will be provided to every person in the world and will be as essential as a birth certificate or a social security number. Also, instead of a password there will be DNA fingerprinting.

By the virtual fact that BKK Bank field of study is Information Systems, BKK Bank feel that BKK Bank is directly associated with the innovators of tomorrow. Therefore, BKK Bank feel that will help contribute positively throughout the new industrial revolution.

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III. COMPANY OVERVIEW

3.1 Company Profile

Today, BKK Bank is Thailand's leading bank. Its stability, innovation and strong customer base means it is at the forefront of change in the Thai banking arena. It is constantly building on its reputation for strength and reliability and at the same time introducing products and new services that will ensure it retains its leadership position well into the future.

The BKK Bank signature consists of the BKK Bank big blue **Texts Based logo** (Company name) including grass that express to strong company that can revive your business.

Figure 3.1. BKK Bank logo.

3.2 Vision

Our Vision

Our Vision is to be the leading financial service provider for all customer groups in Thailand, and to be the leading international bank in Asia. We will do this by providing world-class human resources, technology and systems and ensuring that all of our customers receive a superior service for all of their financial needs.

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Our Customer Commitment

At BKK Bank we recognize that you want financial services which are fast, convenient and secure. Even more than that, you want the advice and support, which will help you to achieve your goals. Our commitment is to always seek out new ways to make your life easier and to help you to grow.

3.3 Mission

Corporate

Serving the corporate sector has long been a traditional strength of BKK Bank, with the majority of Thailand's leading companies choosing to use the Bank's services. BKK Bank's long term relationships with its customers has meant that it has played an important and significant role in terms of supporting Thai business, in all major sectors including export, industrial, agriculture and services

BKK Bank is a leading provider of trade finance services and corporate debt financing in Thailand and its in-depth knowledge of the Thai economy means that it is highly regarded for its specialist industry advice. The Bank offers an extensive and sophisticated range of products including cash management, project financing, custodial services and syndicated loan management services.

BKK Bank has a significant overseas presence, particularly in the Asia Pacific region. Its extensive domestic network of nearly 600 branches gives it a significant competitive advantage in providing service to its corporate customers

BKK Bank's industry leadership position means that it is the first point of contact for overseas banks seeking to do business in Thailand and it has established relationships with over 1500 correspondent banks worldwide

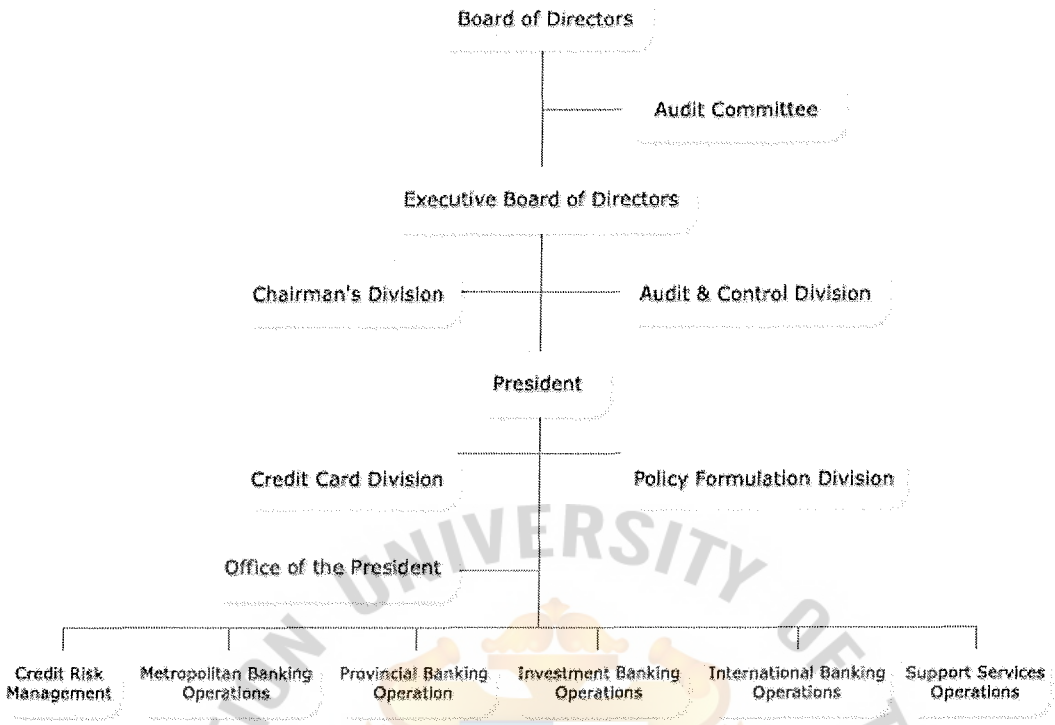

Figure 3.2. Organization Chart

Commercial

In recognition of the importance of medium-sized companies, BKK Bank has set up a Commercial Business Unit, which focuses exclusively on their needs. These customers have the support of their own dedicated Relationship Managers. These managers work consistently with small groups of customers and an essential part of their job is regular visits to clients at their places of work. The Relationship Managers are based at the Bank's Business Centers, which are also staffed by specialists such as trade finance advisors.

Many of the Bank's Commercial customers are in the import-export business and rely on BKK Bank's highly competitive trade finance services. BKK Bank's letters of credit have worldwide recognition and are a preferred instrument of payment among

traders in Asian countries, whether they are trading within Asia, Europe, America or Africa.

Small Business

Small and medium sized businesses (SMEs) are the backbone of the Thai economy. To help this important group grow and prosper, BKK Bank provides an extensive range of lending products and services.

The Bank's network of Business Centers provides dedicated support to both SME and Commercial customers. The officers from these Centers visit customers at their place of work, which gives them a keen insight into their customers' businesses. The Bank works in partnership with its customers and because of this the Bank's officers are able to offer advice and support to help them to grow their businesses.

An important feature of BKK Bank's service to SME operators has been the provision of advice as well as lending. The Bank runs an extensive education program for SMEs in regional centers throughout the country. These include seminars on strategic planning, as well as workshops on how to write business plans. The Bank also produces a number of support publications for SMEs.

Consumer

One of BKK Bank's greatest strengths is its large and convenient network for retail customers. The Bank has the most extensive distribution network in Thailand, with over 600 branches and around 1700 ATM machines. The Bank's Microbranch network, which is situated in some of the most popular locations around the country, has now risen to over 60 branches. These branches offer extended opening hours seven days a week. In addition our advanced BKK Phone Banking Center offers both a personal and automated service to customers 24 hours each day.

Our extensive banking facilities are complemented by the professional and friendly service of our skilled branch staff. Recent changes to the way we operate our branches means marketing staff can now spend even more time working with customers to provide them with ways to achieve their financial goals. BKK Bank's staff can provide assistance on a range of services including home loans and foreign currency services to cash advances and money transfers.

Alongside these positive changes we have also expanded our comprehensive staff training program to ensure that customers always benefit from the most up to date financial and banking advice

International Banking

BKK Bank was the first Thai bank to open an overseas branch and over a period spanning more than 55 years it has built up an extensive network of contacts in the Asia Pacific region. The Bank has 19 overseas branches and two representative offices. These are located in the United States, England, Japan, Hong Kong, China, Taiwan, Singapore, Malaysia, Myanmar, Indonesia, Laos, Vietnam and the Philippines.

As well as day-to-day banking and funds transfer services, BKK Bank provides extensive advisory services, including assistance in finding regional partners and guidance about local regulations.

Treasury

BKK Bank provides a foreign exchange trading service in all major currencies along with a number of regional currencies. The Bank's market views and technical analysis are highly regarded and our corporate dealers keep our customers abreast of any significant movements as well as changing market trends in the currencies of their interest. In addition the Bank helps customers to choose suitable hedging instruments to

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manage their risk exposures. As a major player in the US dollar/Thai Baht market, we provide our customers with competitive THB rates for all currencies that we trade.

As a primary dealer in government and commercial bonds, BKK Bank has the largest bond volume of any Thai bank and the most active secondary market in government bond trading in Thailand.

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IV. FINANCIAL ANALYSIS

Today, Intranets provide for a paperless environment. Besides redefining Human Resources, it is changing the way tasks are accomplished in a company. Intranets are becoming a trend and giving such benefits as saving time and money. A survey in September 1996 by Hambretch and Quist reports that ninety percent of Fortune 200 companies are developing intranets. Watson Wyatt Worldwide in Bethesda, Maryland conducted another interesting study, which found that almost eighty percent of questions from employees can be answered by using an intranet or interactive voice response system. The technology used to provide the intranets are streamlining and automating many functions that in turn are reducing costs and raising profits. It was noted that intranets are not costly to implement and provide Human Resources the opportunity to use their personnel more effectively.

Another key factor increasing the value of the intranet is to reengineer the workflow by using intranet technology. To get the most benefits from an intranet site, the company must go beyond just posting the information. They must also implement services, such as employee and manager self-service. Electronically routing information and tasks will give many benefits. The benefits include reducing cycle time and paper and also saving money. When looking at the cost side of intranet and workflow, besides the cost of the intranet itself, it is difficult and takes time to get the system running throughout the organization. Employees make their own changes instead of Human Resources. Also job postings are electronically controlled by expiration date that a manager sets when posting the job. This reduces costs and leads to a paperless environment. It also improves employee morale.

The cost-benefits of intranets are meant to be self-evident. After all, the set up costs appear to be minimal and the benefits although largely intangible are, by all accounts, substantial.

4.1 Cost-Benefit Analysis

Establishing Some Basic Facts And Figures

The number of people within the target population who will need new PCs, the number who are currently not networked and the number who will be provided with access to the Internet.

The average annual salary and benefits of the target population, the average working hours in a day and working days in a year (used to calculate labour savings and productivity gains).

Analysing Costs

There are two main categories of cost:

Capital costs: hardware and software costs that will be met by the organisation's capital budget and, normally, written off over a number of years.

Revenue costs: other costs that are likely to be borne by the organisation's normal expense budget.

It is also necessary to make a distinction between the one-off costs associated with start-up and ongoing maintenance costs. Here's some ideas for what to include in each case:

Start-up Capital Costs

These costs form a major part of your up-front investment. Because, as fixed assets, have a useful life of several years and a resale value, normally written off over three or four years. Finance department will be able to tell about organisation's depreciation policy is. And also need to consult IT department to get estimates for all the hardware and software needed:

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New PCs: for providing intranet access to employees without their own PCs.

Providing network connections to PCs not currently networked.

Web servers and server software.

It needs to provide for the cost of software applications, whether are developed on a bespoke basis (in-house or outside) or purchased off-the-shelf. Considerable prices for 'industrial strength' applications, but much cheaper or even free applications can be obtained with a little research. It depend on what you are using your intranet for:

Information publishing: examples of automated applications include directories (phone, employees, products, services, locations, etc.) and applications that automate the production of news pages, classified ads or newsletters.

E-mail: intranet e-mail is typically provided with a single off-the-shelf application, plus individual client licenses.

Document management: typically one main application.

Training: for ease of calculation, assume that an intranet training application represents one hour of self-instructional material.

Workflow: applications include on-line forms (holiday, sickness, expenses, timesheets, purchasing, surveys, bookings for rooms, training or travel). If these simply submit messages to be processed manually, they will be relatively inexpensive to develop. If complete administrative processes are to be automated, which use the intranet as a front-end, a more substantial investment will be required, whether in bespoke software development or purchase of/upgrade to intranet-enabled versions of off-the-shelf systems such as HR databases, media libraries, sales support systems, etc.

Databases and other bespoke systems: include any application that provides users with an intranet front-end to a major, existing, bespoke corporate system.

Discussion: there will typically be one application to allow users to debate topics over the intranet.

Start-up Revenue Costs

These also form part of your up-front investment, but are more likely to be written off in the first year of implementation:

Design consultancy: the cost, whether internal or external, of creating a structural, navigational and graphical design for the part of the intranet being analysed.

Promotion: the cost, again internal or external, of launching the intranet to your target population.

Training: the total cost, per user, of providing training in both how to use the intranet and how to provide content.

Ongoing Capital Costs

Some money will have to be reserved each year, from year 2, for upgrades to your server hardware and software and to your off-the-shelf applications. Perhaps the best way of estimating this will be as a percentage of the initial cost – say 25%.

Ongoing revenue costs

A considerable amount of effort is required to maintain and continuously improve your intranet. These costs need to be budgeted from year one:

Editorial and design personnel: the people required to administer intranet policies and act as overall content editors for your target population. Remember to include salaries, benefits and expenses.

Technical personnel: the people required by the organisation as a whole to keep your intranet up and running from a technical perspective.

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Internet access: the cost of providing lines out to the Internet. A simple way of estimating this is to make a small annual allowance.

The following costs apply after the first year of implementation:

Ongoing consultancy: continuous modifications and improvements to your intranet design, expressed as a percentage of start-up design consultancy costs.

Ongoing promotion: continuing promotion of the intranet to your target population, expressed as a percentage of start-up promotional costs.

Ongoing training: a percentage of start-up training costs, largely to account for employee turnover.

Maintenance of bespoke applications: assuming this work is not carried out by the technical personnel listed above, make an allowance for continuing development of your bespoke applications, say 25% of the initial cost.

Forecasting Benefits

Not many people have trouble calculating costs. It takes a little more ingenuity to pin down the benefits. There are three main categories of benefit:

Direct Cost Savings: savings in expenditure other than labour - print, paper, telephone, travel costs, etc. - that can be directly attributed to the introduction of the intranet. These can usually be calculated in three steps: (1) the number of incidences of expenditure in the time period, (2) the cost of each incidence and (3) the proportion of these that could be eliminated using the intranet. For example, if the number of pages of formal printed material received per person per year was 500, the cost in pence per page, including printing and delivery, was 3.60 Baht and the percentage of these pages that could be delivered on-line was 70%, the saving in bahts would be 500 x (3.6) x 70% x the size of the population.

Labour Savings: savings in the amount of time required to carry out tasks as a result of introducing the intranet. These can be expressed in minutes per person per day. To calculate the saving, divide the number of minutes saved by the number of minutes in the day (60 x the number of working hours) and multiply by the size of the population and the average salary.

Productivity Increases: increases in output per person attributable to the introduction of the intranet, expressed as a percentage. Because personal productivity has such a wide range of implications from job to job and organisation to organisation, it is probably easier to convert these to simple labour savings. For example, if the total productivity gains were 3%, calculate the savings as (3 / 103) x the size of the population x the average salary. The actual effect of higher productivity, such as increases in sales, could well be much larger and, if you can estimate these, then you should.

Each category of intranet usage has its own associated benefits:

Information Publishing

Direct cost savings: the print, paper and delivery costs that can be saved by making documents available on-line and discontinuing their paper equivalents. Clearly this saving can not be realised if paper and on-line versions operate in parallel.

Labour savings: faster access to information; more rapid and easy exchange of information; less duplication of effort (because there need be only one owner for each piece of information) and less interruptions (because you can control when you access information).

Productivity increases: through the availability of more accurate and up-to-date information and making available information that was not previously available.

Intranet e-mail

Direct cost savings: Costs of phone calls, faxes, memos, letters, diskettes and other digital media, saved through the use of e-mail both within and outside the organisation.

Labour savings: less time trying to get through on the 'phone; less time spent preparing and checking items to be sent out and less interruptions (because you can control when you access information).

Productivity increases: faster access to information.

Document Management

Direct cost savings: the print, paper, digital media and delivery costs that can be saved by making documents available on-line for review, editing and approval rather than distributing as hard copy or on diskette.

Labour savings: less time spent sending out documents for review, editing and revision; less time spent locating/obtaining documents for review, editing and revision; less duplication of effort (data can be shared between documents by linking or copying and pasting); less time wasted correcting errors caused by work being undertaken on incorrect versions.

Productivity increases: faster access to accurate and up-to-date business documents.

Training

Direct cost savings: savings in travel and accommodation, trainers, rooms and equipment for courses delivered via the intranet rather than in a classroom.

Labour savings: less time spent travelling to courses; less time required to reach learning objectives (through the use of more efficient self-instructional methods).

Productivity increases: immediate access to required knowledge and skills.

Workflow

Direct cost savings: the print, paper and delivery costs that can be saved by making forms available on-line.

Labour savings: less time spent per person per form in obtaining up-to-date copies of the form to complete; for each fully-integrated workflow application, the number of days saved in admin time per year.

Productivity increases: faster and more reliable admin processes.

Databases/bespoke Systems

Labour savings: less time required to learn and use applications.

Productivity increases: through information being available that was not previously available.

Discussion

Direct cost savings: travel and accommodation costs for meetings that could instead be conducted on-line.

Labour savings: less time spent travelling to meetings; less time spent in meetings.

Productivity increases: faster resolution of issues and concerns; the resolution of issues and concerns that would not have been possible without the intranet.

Summarising costs

The following costs are likely to be central:

server hardware and software

the purchase, development, maintenance and upgrades to software applications

provision of technical personnel

Remember that you only need to take account of the cost of applications that are required to support your initial intranet implementation.

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Table 4.1. Comparing Costs and Benefits of Online-Inventories system.

	Year 1	Year 2	Year 3	Year 4	Year 5
Benefits					
Information publishing	100,000	200,000	200,000	200,000	200,000
E-mail	0	0	0	0	0
Document management	30,000	30,000	30,000	30,000	30,000
Training	30,000	50,000	50,000	50,000	50,000
Workflow	20,000	40,000	40,000	40,000	40,000
Logistics	100,000	100,000	100,000	100,000	100,000
Total (Z)	**280,000**	**420,000**	**420,000**	**420,000**	**420,000**
Depreciation of capital costs					
New PCs	0	0	0	0	0
Networking	10,000	10,000	10,000	0	0
Server h'ware & s'ware	40,000	42,000	45,000	20,000	20,000
Total (X)	**50,000**	**52,000**	**55,000**	**20,000**	**20,000**
Revenue costs					
Technical personnel	150,000	150,000	150,000	150,000	150,000
Internet access	10,000	10,000	10,000	10,000	10,000
Training	10,000	3,000	3,000	3,000	3,000
Total (Y)	**170,000**	**163,500**	**163,500**	**163,500**	**163,500**
Total costs (X + Y)	**220,000**	**215,500**	**218,500**	**183,500**	**183,500**
Profit or loss (Z – (X + Y))	60,000	204,500	201,500	236,500	236,500
Accumulated profit or loss	60,000	264,500	466,000	702,500	939,000

4.1 Return on Investment (ROI)

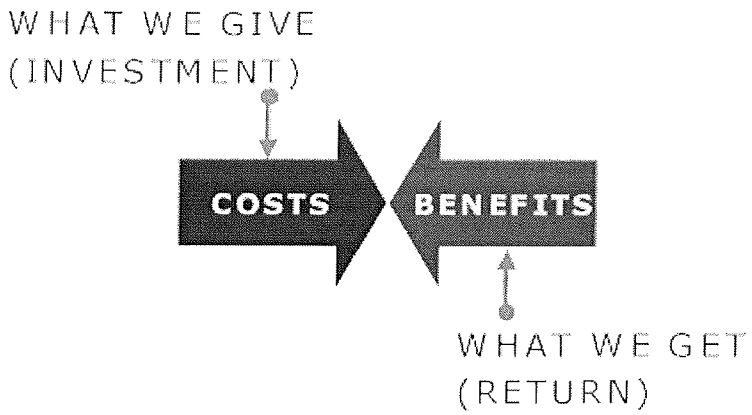

Figure 4.1. Return on investment.

Return on investment is a way of expressing as a percentage on the return you have made relative to the amount you have invested:

$$ROI = \frac{\text{benefits} - \text{investment}}{\text{Investment}} \times 100$$

Table 4.2. ROI Analysis.

	Year 1	Year 2	Year 3	Year 4	Year 5
Benefits	280,000	420,000	420,000	420,000	420,000
Ongoing capital costs	50,000	52,000	55,000	20,000	20,000
Ongoing revenue costs	170,000	163,500	163,500	163,500	163,500
Net return	60,000	204,500	201,500	236,500	236,500
Return on investment (%)	27	95	92	128	128
Accumulated ROI (%)	27	122	214	342	470

Payback Period

The payback period is the time it takes to 'break even' on your investment, in other words when the accumulated return on investment figure first exceeds 100%. In the example above, the payback period is 21 months, or nine months in second year.

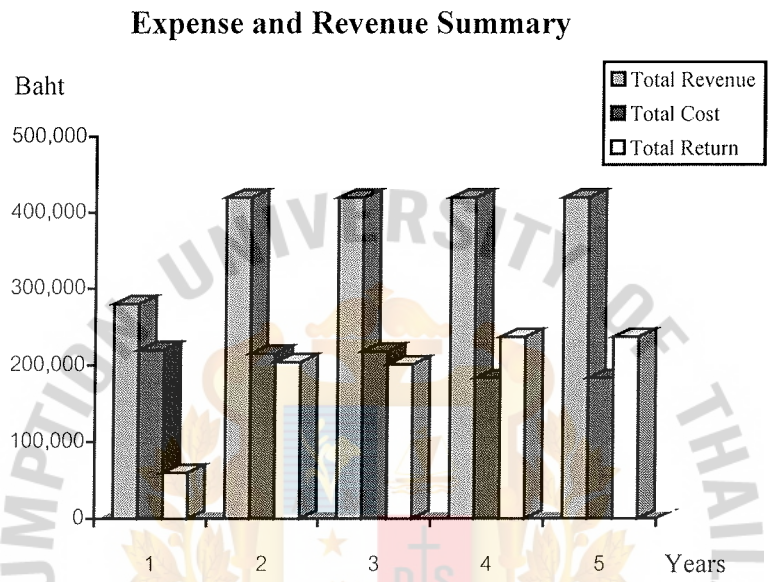

Figure 4.2. Expense and Revenue Summary.

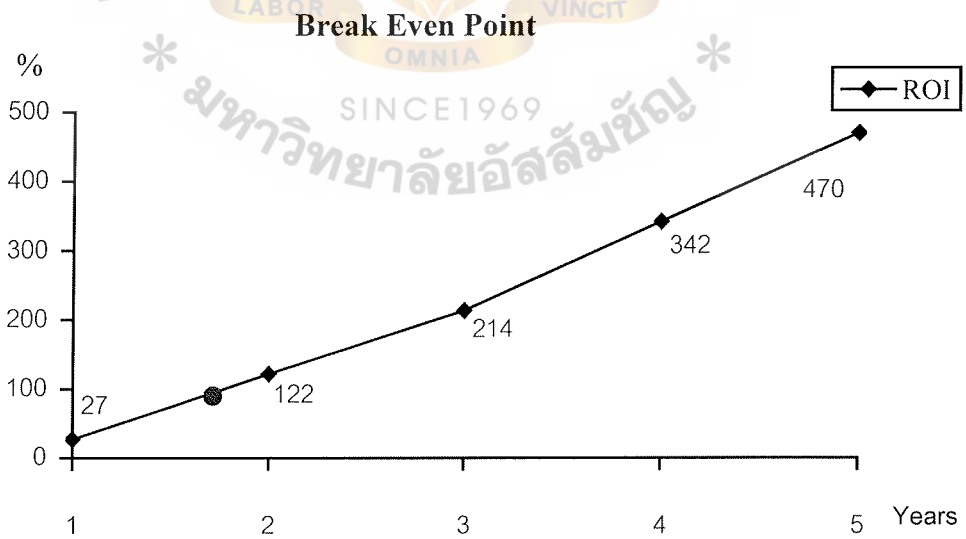

Figure 4.3. Break Even Point.

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4.3 Net Present Value

Net Present Value (NPV) is a way of comparing the value of money now with the value of money in the future.

Due to the economic situation, the interest rate is at 1.25% according to Bangkok Bank for September 2003. However, the research shows that the interest rate will be flat for three years approximately.

This will calculate NPV for the next five years since it is estimated that the ROI is two year. Moreover, the revenue is estimated up to five years.

Therefore, this interest rate will be used for the calculation of net present value for the next five years.

Net Present Value = Present Value Of Cash Inflow - Present value Of Cash Outflow

Present values of cash out flow

Assumption: The payment is paid at the beginning of the year.

Present value of cash out flow for the first year = 220,000

Present value of cash out flow for the second year = 215,500/1.0125 = 212,839.50

Present value of cash out flow for the third year = 218,500/1.0125 ^2 = 213,149.94

Present value of cash out flow for the fourth year = 183,500/1.0125 ^3 = 176,799.31

Present value of cash out flow for the fifth year = 183,500/1.0125 ^4 = 174,612.24

Therefore, present value of cash out flow = 997,400.99

Present value of cash in flow.

Assumption: The money is got at the beginning of the year.

Present value of cash in flow for the first year = 280,000

Present value of cash in flow for the second year = 420,000/1.0125 = 414,814.81

Present value of cash in flow for the third year = 420,000/1.0125 ^2 = 409,693.64

Present value of cash in flow for the fourth year = 420,000/1.0125 ^3 = 404,635.70

Present value of cash in flow for the fifth year = 420,000/1.0125 ^4 = 399,640.20

Therefore, present value of cash in flow = 1,908,784.35

Net Present Value = Present Value of Cash Inflow - Present value of Cash Outflow

Net Present Value = 1,908,784.35 - 997,400.99= 911,383.36

As seen from the calculation, the net present value is positive for five years estimation.

From the analysis, the return on investment is two years, which is reasonable in today's economic situation.

Net present value is positive for 911,383.36 Baht.

The result shows a positive sign to invest since after the first year the profit will return. Moreover, the opportunity to grow in the business is possible. Therefore, this project should be invested in.

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V. WEB DEVELOPMENT

5.1 Non-Functional Requirements

Performance & Availability Requirement

Hardware Requirement

A 16-bit /256 color support for monitor is required for best view.

32MB RAM is necessary.

The whole system will require around 10MB hard disk space.

Software Requirement

Win98+/2000/XP is preferable.

The PC must support java enable application.

At the company side, such terminals will require which can support and handle database.

Network Requirement

Since this will be a multi-user, multitasking system the user PC must be part of some Intranet. The business will be possible only when the PC is connected to the network with the server.

Performance Requirement

It is required for the system to support multi-user and multitasking environment. Also, database will be concurrent to the user 's changes.

Application Security

Security will be guaranteed to the user. So it will be a primary concern right from the designing stage. The system will keep detailed records of the user but will still maintain their anonymity. As mentioned the system will be totally handled only after login by the customer.

Design Constraint

Only a single user login is allowed from a particular terminal.

Multiple logins for the same customers will be prohibited.

User will not be able to buy/browse things before logging into the system.

Impact & Dependency

(a) Systems

As the design of the project is to be done in JAVA, the application will be platform independent. It will not affect the working of any other software/tool on the server/ workstation. And vice versa i.e working of any other software should not have an affect on the working of this software system.

(b) Interface

A successful application must also utilize design diversity. For instance, a highly technical site may have incredible capabilities, but usually lacks the aesthetic value and user –friendliness necessary to satisfy the needs of your target market. On the other hand, a application developed solely on the basis of graphical content may look wonderful and appear user-friendly, but will inevitably lack the necessary back-end structure and technical capabilities which would allow it to function in the manner in which it was intended. Interfaces will be designed by bringing these individual pieces together into a well-built, well-functioning, and user-friendly site.

5.2 Functional Requirements

(1) At first a user is required to log on into the system.

(2) There will be different account for each users. Both will be directed to their account by the same login screen.

(3) A central database will be maintained on a server and should be accessible by any client from within the intranet of the company.

(4) Once the users have been logged into the system he is asked to choose anything of the following options:

(a) Enter new order

A new Order, with the details about the Customer, and he Order is entered here. If the username is not correct, a pop-up screen should be shown.

(b) Check the Status of the Order

At anytime the Sales Person should be able to check the status of a particular order, meaning to say whether it is processed and ready to deliver or is it waiting in queue for the Inventory to be updated.

(c) Logout

Whenever a Sales Person logs out, all the connections to the database should be terminated.

The admin has the following Options:

(a) View Inventory

Here, the admin can see a report showing how many components are available in the inventory and how many products can he make using those components.

(b) Add new customer

In case of a new Customer, the admin should be able to add new Customers, along with their details. **A unique Customer Id should be maintained.** This information should be saved in the database.

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(c) Check History

Here, the admin will input the name of any users and will see a list of all the previous or current orders placed by the respective users. Again if he clicks on any of the orders listed he should see all the details associated with that order.

(d) Check Status

This should be similar to what the sales person sees. The admin will input the order Id and it will show him whether the respective order was processed or is on request.

(e) Log Out

Whenever a admin logs out, all the connections to the database should be terminated.

5.3 ASP

An Active Server Page (ASP) is an HTML page that includes one or more scripts (small embedded programs) that are processed on a Microsoft Web server before the page is sent to the user. An ASP is somewhat similar to a server-side include or a common gateway interface (CGI) application in that all involve programs that run on the server, usually tailoring a page for the user. Typically, the script in the Web page at the server uses input received as the result of the user's request for the page to access data from a database and then builds or customizes the page on the fly before sending it to the requestor.

ASP is a feature of the Microsoft Internet Information Server (IIS), but, since the server-side script is just building a regular HTML page, it can be delivered to almost any browser. You can create an ASP file by including a script written in VBScript or JScript in an HTML file or by using ActiveX Data Objects (ADOs) program statements

in the HTML file. You name the HTML file with the ".asp" file suffix. Microsoft recommends the use of the server-side ASP rather than a client-side script, where there is actually a choice, because the server-side script will result in an easily displayable HTML page. Client-side scripts (for example, with JavaScript) may not work as intended on older browsers.

Why Using ASP?

Compared with CGI, ASP runs faster and is simpler to learn. ASP is NOT a language like JAVA. It is not an application such as FrontPage 2000. ASP is a scripting language that traces its origin back to Visual Basic. A full-blown version of ASP is Visual InterDev. ASP codes live inside the web page that resides on the server and only executes the code when it is called (when a user opens the page from a browser). Since it runs on the server, it provides many benefits. Among them, these are worth Speed (servers run faster than regular PCs) Security and privacy (the ASP code never leaves the server and is not sent back with the data Consistency (you can call up the page from any browser and will not suffer from compatibility, version check problems).

Reduction in load on bandwidth and users' machines (since nothing is executed on the users' side, there will not be added traffic to pass the code back and forth. It is called "thin client" It is a technology used TOGETHER with HTML to build dynamic Web page.

5.4 Creating a Web-based Client/Based Client/Server

Table 5.1. Definition.

CLIENT-SERVER	A common form of distributed system in which software is split between server tasks and client tasks. A client sends requests to a server, according to some protocol, asking for information or action, and the server responds.
CLIENT	A computer system or process that requests a service of another computer system or process (a "server") using some kind of protocol and accepts the server's responses. A client is part of client-server software architecture.
SERVER	A program which provides some service to other (client) programs. The connection between client and server is normally by means of message passing, often over a network, and uses some protocol to encode the client's requests and the server's responses.
DATA CONNECTIVITY	Connectivity between server and the user accessing its data though web.
OPEN DATABASE CONNECTIVITY	free access to the server database for a user.
QUERY	A user's (or agent's) request for information, generally as a formal request to a database or search engine.

Web - based Client/Server Network on PC Based Client/Server Network on PC

A Web-based client/server network is a computer communication system, in which client computers send requests to the server computer for data from its database, and the server returns the results to the clients via Internet/WWW. The server can be set up on a Windows 95, 98, 2000 or NT computer connected to the Internet; thus, it can be accessed via Internet by any client computers around the world. The required software is a Windows 95/98/2000/NT Web server.

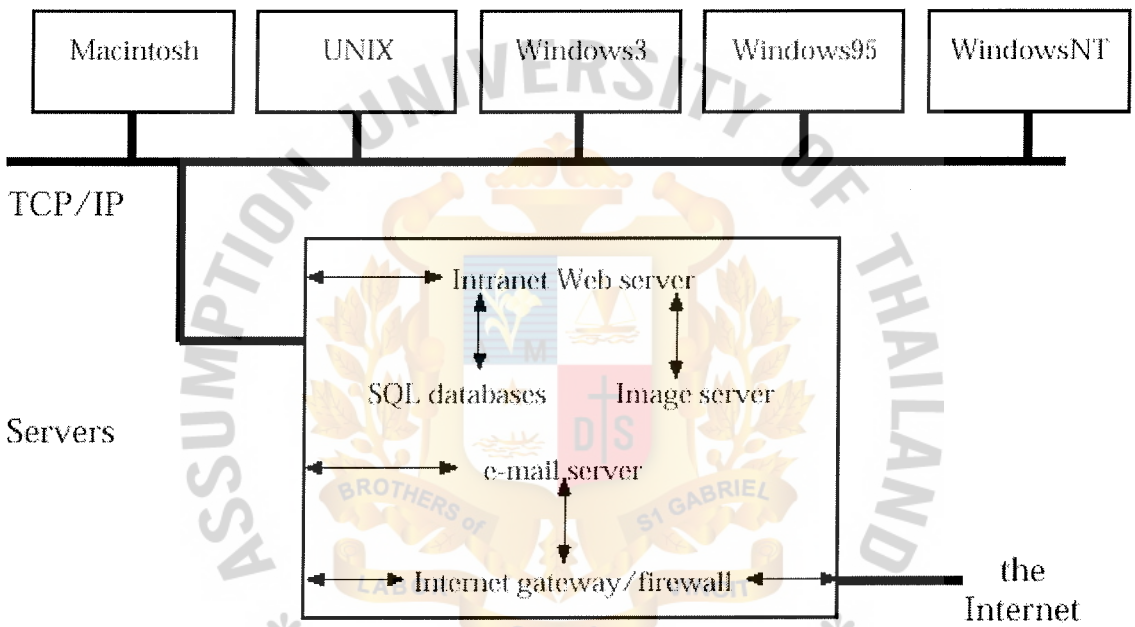

Figure 5.1. Client Workstations.

The basic characteristics of client/server architectures are:

(1) combination of a client or front-end portion that interacts with the user, and a server or back-end portion that interacts with the shared resource. The client process contains solution-specific logic and provides the interface between the user and the rest of the application system. The server process acts as a software engine that manages shared resources such as databases, printers, modems, or high powered processors.

(2) The front-end task and back-end task have fundamentally different requirements for computing resources such as processor speeds, memory, disk speeds and capacities, and input/output devices.

(3) The environment is typically heterogeneous and multivendor. The hardware platform and operating system of client and server are not usually the same.Client and server processes communicate through a well-defined set of standard application program nterfaces (API's) and RPC's.

(4) An important characteristic of client-server systems is scalability. They can be scaled horizontally or vertically. Horizontal scaling means adding or removing client workstations with only a slight performance impact. Vertical scaling means migrating to a larger and faster server machine or multiservers.

The creation of Web-based client/server network on personal computers to meet their hands-on learning needs as well as the workplace demand. First, the Web-based client/server network is defined. Second, the objectives of this hands-on training model are stated. Then, a step-by-step approach to creating and managing the network is presented with examples. Following this approach, is able to create and manage a Web-based client/server network on their personal computers. Finally, the implications of this hands-on training model are discussed.

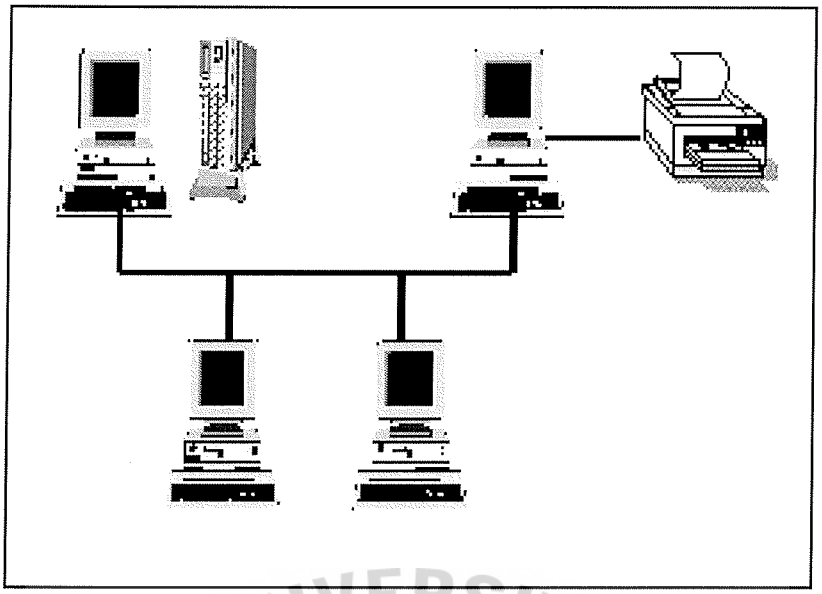

Figure 5.2. Peer – to Peer Network.

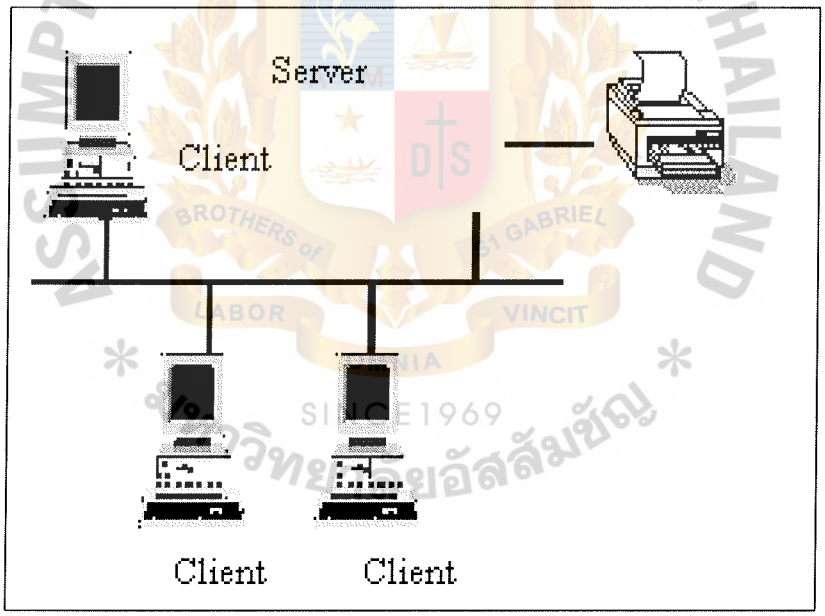

Figure 5.3. Client/Server Network.

Ongoing Developments and Future Plans

On the technological front, I am migrating our scripting platform to ASP (Active Server Pages). Initially, these new technologies were used for fresh development of applications; gradually, our existing applications are being migrated to the new platforms.

I am also planning to hold user workshops with a two-fold objective:

(1) To increase acceptance and usage of intranet applications; and also

(2) To elicit feedback for modifications and/or provision of additional functionality for my inventory online.

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VI. WEB DESIGN

6.1 Site Structure

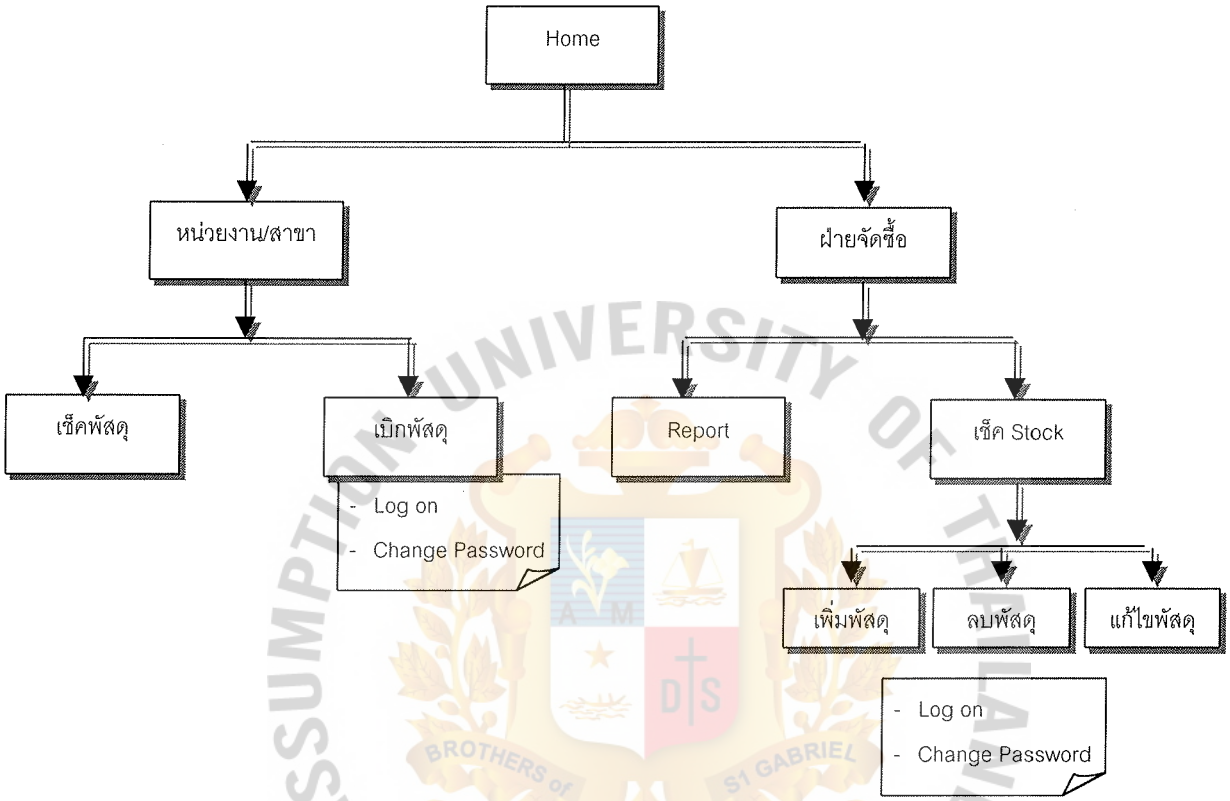

Figure 6.1. Site Structure.

Inventories-Online site structure is separated into 2 parts as follows:

<u>For Division/Branch</u>

(1) Check Inventories.

(2) Order inventories.

<u>For Inventory Center and Warehouse</u>

(1) Check Stock and add, delete, edit inventories in database.

(2) Create Report of inventories ordering for each division/branch.

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6.2 Web Design

The designs of Inventory online are simple, natural to use, and completely in tune with users' needs and experiences. Achieving these solutions in the design of technology products and e-business applications requires building a multi-disciplinary team, tapping resources such as published research, guidelines, standards, and involving users throughout the design process.

Inventory Online's Home Page

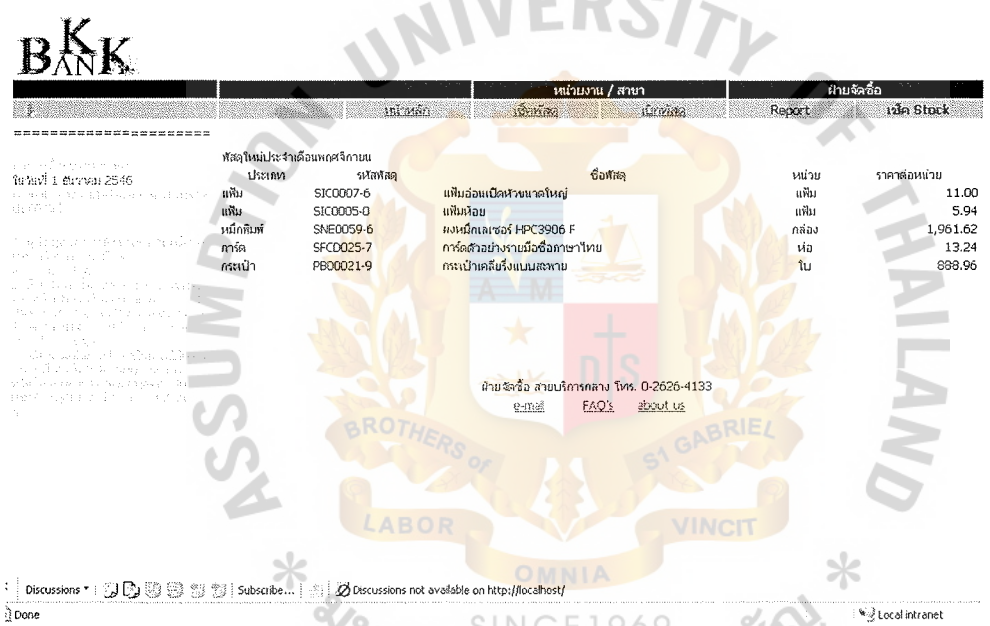

Figure 6.2. Home Page.

Inventory Online's Check Inventory Page

(1) Enter the division/branch number

(2) If branch number is valid, The system will show inventories that the division/branch did not get from purchase department and user can cancel inventories from list.

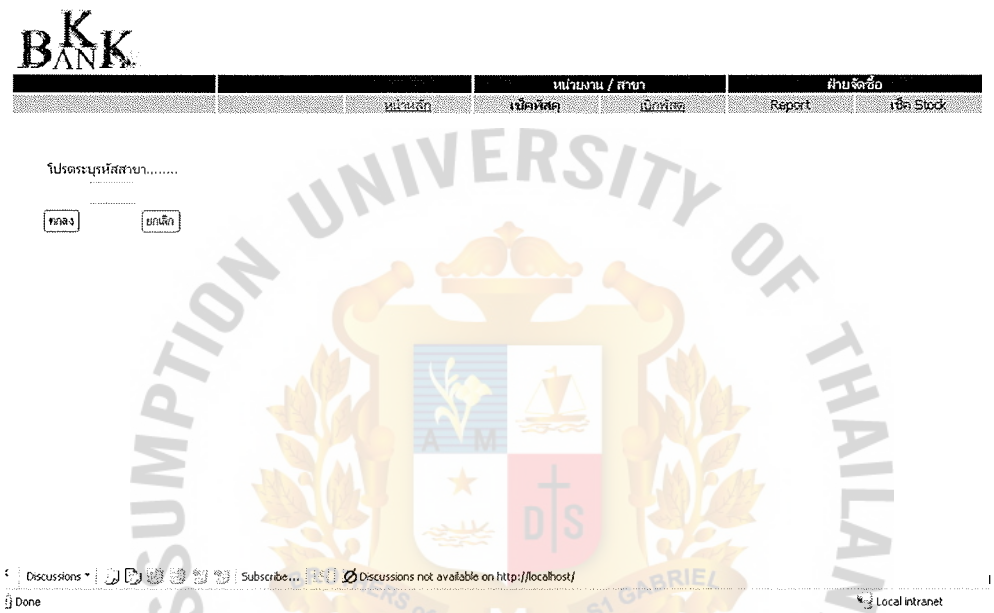

Figure 6.3. Check Inventory Page - Input Division/Branch Number.

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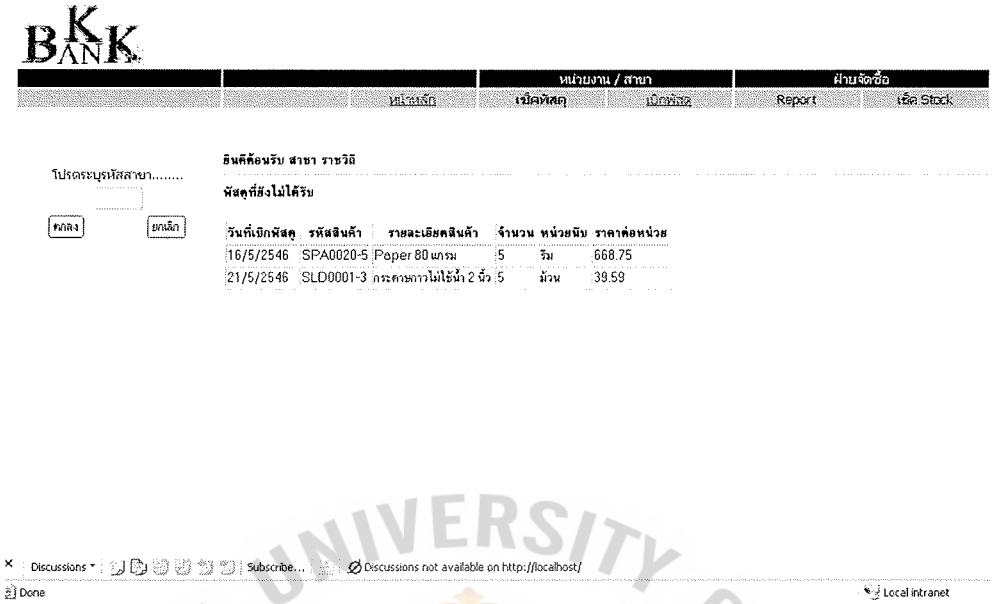

Figure 6.4. Check Inventory Page

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Inventory Online's Order Inventory Page

(1) Enter Username and password on the logon screen

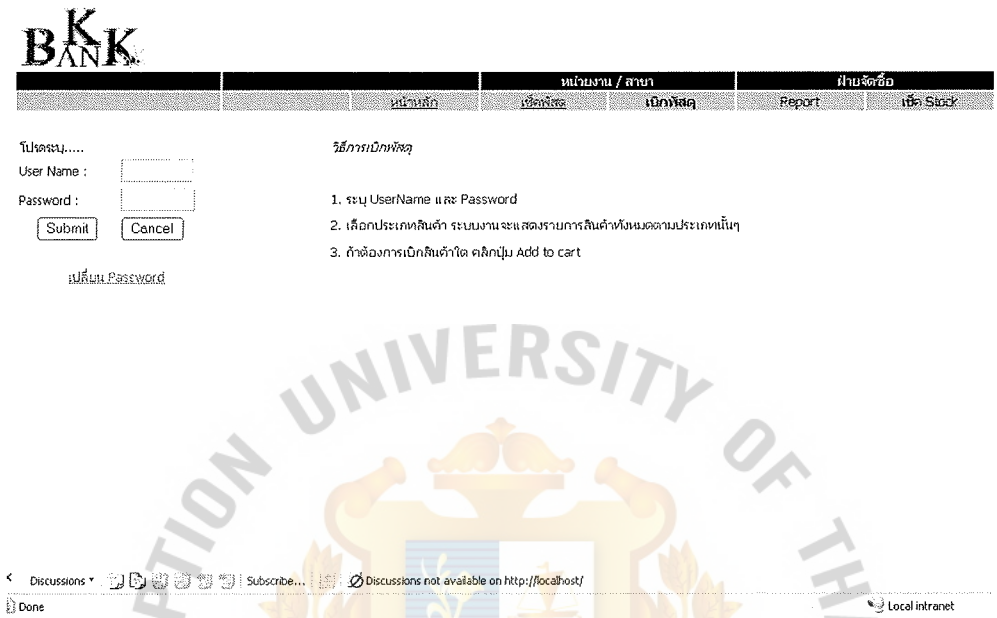

Figure 6.5. Order Inventory Page- Logon Screen.

(2) If User name and password are valid, The system will show category of product that user would like to order.

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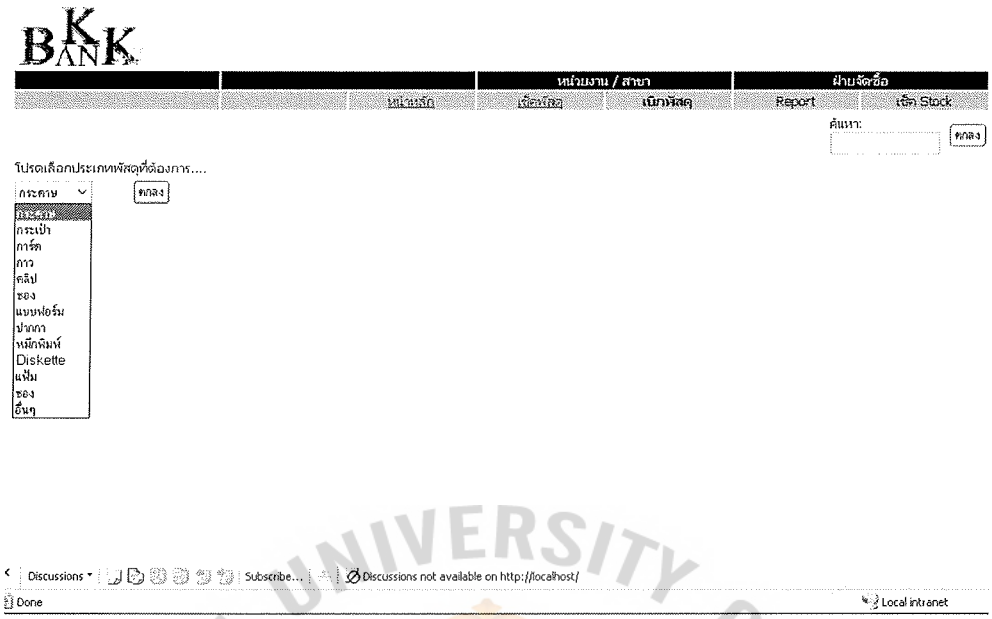

Figure 6.6. Order Inventory Page- Category of Product.

(3) User can choose category of product and click 'OK', the screen will show all product of these category

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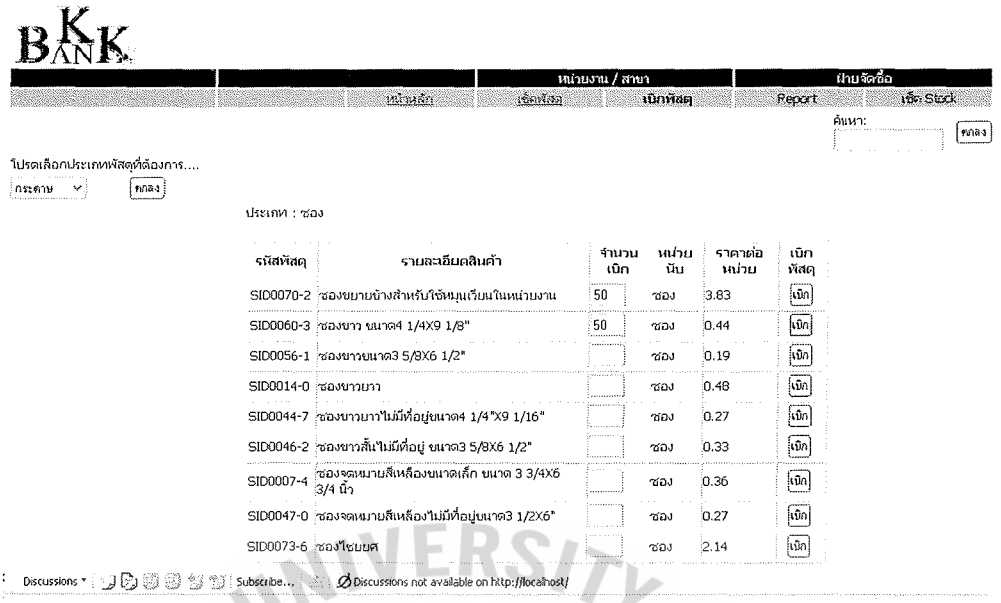

Figure 6.7. Order Inventory Page- Category's Inventory.

(4) Input volume of product and click 'Order', the screen will show all product that user order. If user would like to cancel order some product, click 'Delete'

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BANK

		หน่วยงาน / สาขา		ฝ่ายจัดซื้อ	
	หน่วยนับ	เบิกพัสดุ	เบิกพัสดุ	Report	เช็ค Stock

01/10/2003

รหัสพัสดุ	รายละเอียดพัสดุ	จำนวนเบิก	หน่วยนับ	ราคาต่อหน่วย	รวมราคา	ลบ
SLF0015-8	กาวแท่ง	7	แท่ง	16.26	113.82	☐
SID0070-2	ซองขยายข้างสำหรับใช้หมุนเวียนในหน่วยงาน	50	ซอง	3.83	191.5	☐
SID0060-3	ซองยาว ขนาด4 1/4X9 1/8"	50	ซอง	0.44	22	☐
SLB0004-1	คลิปขนาด 1 1/4 นิ้ว	30	ตัว	1.18	35.4	☐
	รวม				362.72	

เลือกรายการต่อ | คำนวณใหม่ | ตั้งงบประมาณ

Discussions | Subscribe... | Discussions not available on http://localhost/

Figure 6.8. Order Inventory Page.

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Inventory Online's Report Page

Admin can check division/branch's order by month.

(1) Enter date (dd/mm/yyyy)

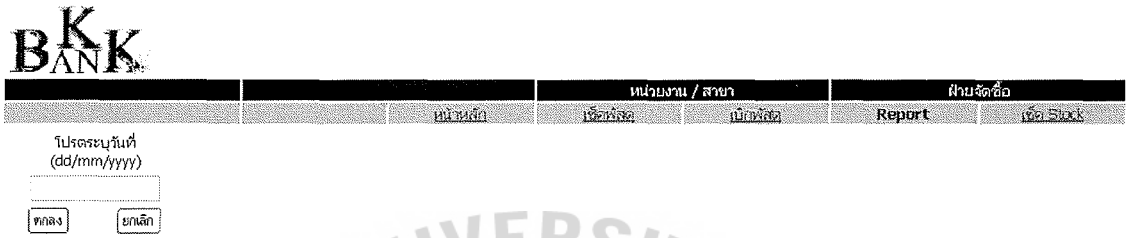

Figure 6.9. Report Page - Input Date.

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BKK BANK

		หน่วยงาน / สาขา		ฝ่ายจัดซื้อ	
	หน้าหลัก	เช็คพัสดุ	เบิกพัสดุ	Report	เช็ค Stock

โปรดระบุวันที่
(dd/mm/yyyy)

ตกลง ยกเลิก

รายการพัสดุ

รหัสสาขา	วันที่เบิกพัสดุ	รหัสสินค้า	รายละเอียดสินค้า	จำนวน	หน่วยนับ	ราคาต่อหน่วย
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01
150	30/10/2546	SLB0005-8	คลิปขนาด 1 5/8 นิ้วเบอร์ 109	4	ตัว	2.63
150	30/10/2546	SJB0005-0	ปากกาเน้นข้อความสีเขียว	6	ด้าม	14.01

Figure 6.10. Report Page (Daily).

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Inventory Online's Check Stock Page

For admin to check stock of product.

(1) Enter admin's password on the login screen.

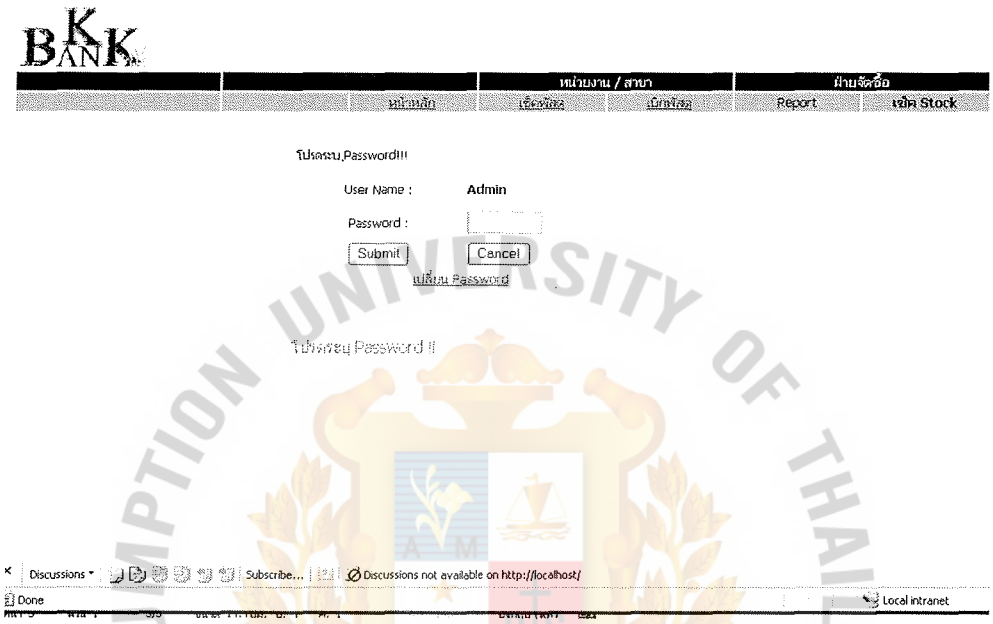

Figure 6.11. Check Stock Page - Logon Screen.

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Inventory Online's Add New Product Page

For admin to add new product.

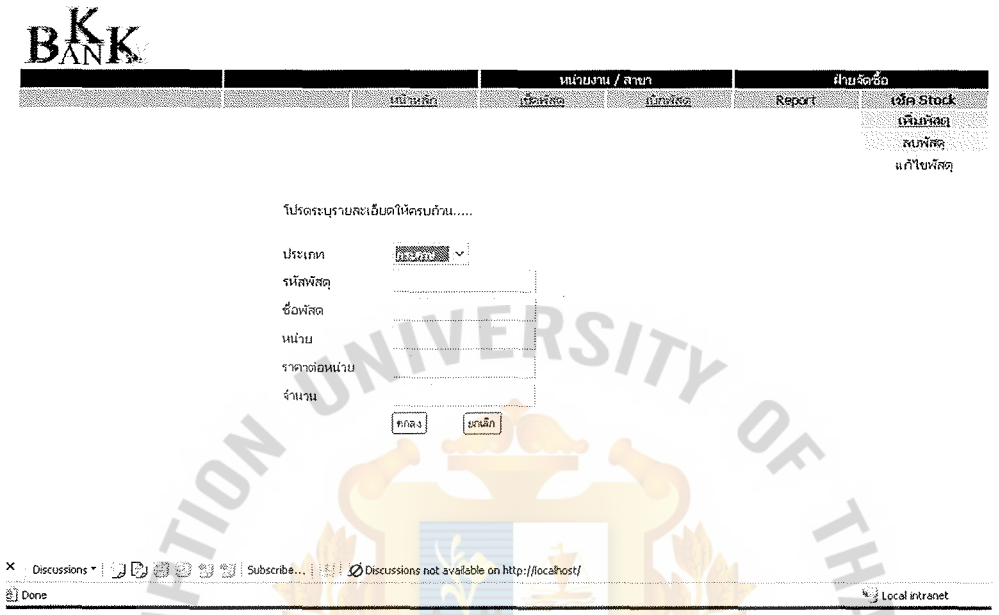

Figure 6.12. Check Stock Page - Add New Product.

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Inventory Online's Delete Product Page

For admin to delete the product from stock.

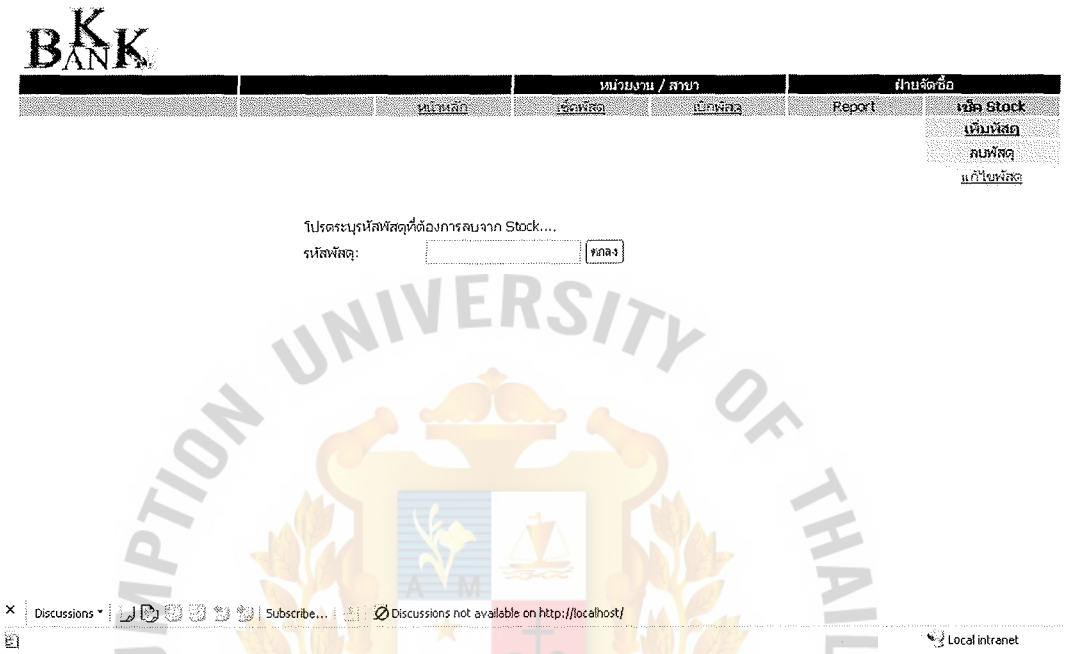

Figure 6.13. Check Stock Page - Delete Product.

Inventory Online's Update Product Page

For admin to update product.

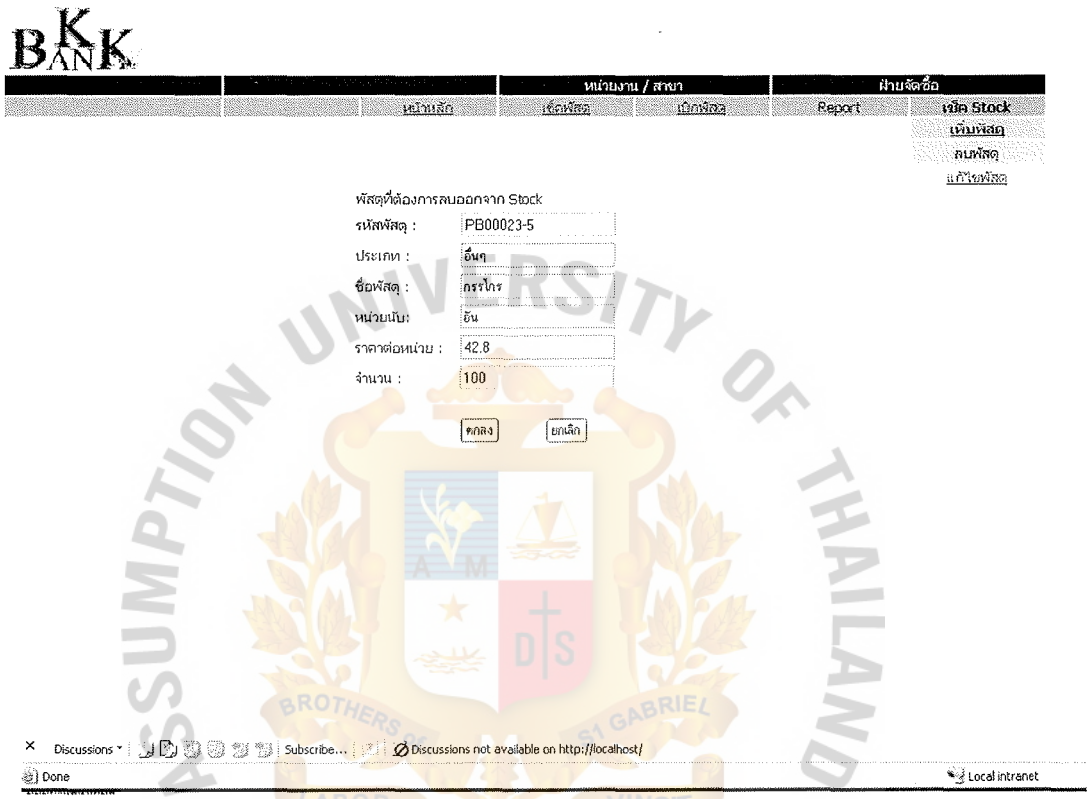

Figure 6.14. Check Stock Page - Update Product.

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Inventory Online's Change Password Page

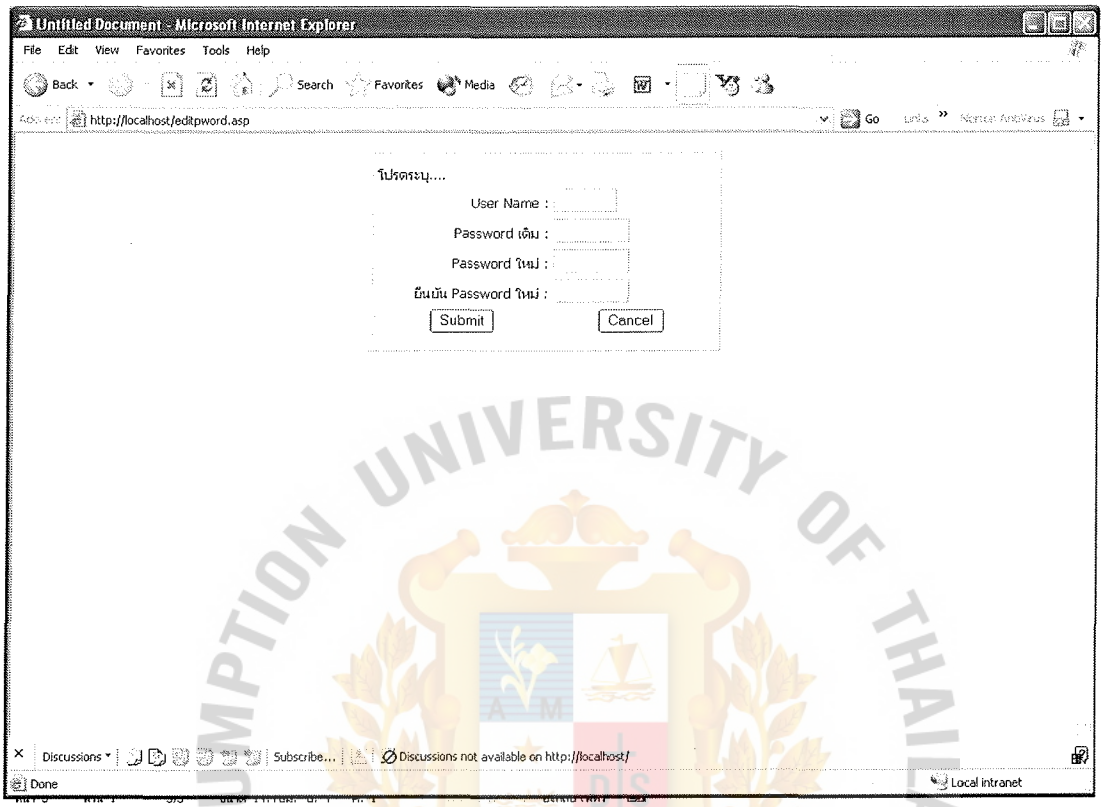

Figure 6.15. Change Password Page

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VII. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Online-Inventories System can help BKK Bank to reduce internal corporate networking costs when BKK Bank use manual working including to cost of logistics about 100,000 baht per year and help officers to increase convenience because Online-Inventories System use web-based technology via company Intranet Website.

Online-Inventories System have been highly rewarding and beneficial. The provision of web-based interfaces for most of the functionalities of our major applications has resulted in:

(1) increased use of IT systems

(2) a quantum shift in "user friendliness" of IT systems

While BKK Bank continue to improve the Online-Inventories System, BKK Bank's objective is to ensure that the intranet acts as a single window for all the corporate information needs.

From Financial analysis part, return on investment is calculated total profit for the first year is 20,000 baht. Therefore the return on investment period is in middle of the third year. This project should be invested in.

The program and software that Online-Inventories System used in creating the web pages are only dreamweaver and also add VB Script, JAVA Script and ASP language into HTML page. Online-Inventories System intranet web site are designed to simple, natural to use, user friendly, by using blue and orange colour for header page and using white colour for background.

This project has successfully fulfilled the objective of developing intranet web site of Online-Inventories System.

7.2 Recommendations

In the future plan, BKK Bank have three parts that will develop on Online-Inventories System Intranet website.

Part 1

Now, Online-Inventories System use Microsoft Access for database. In the future, BKK Bank will develop database to using SQL Server because it has efficiency more than Microsoft Access.

Part 2

For function of Online-Inventories System, BKK Bank plan to increase functions for supporting requirement of user and admin such as step of authorizer who release inventories ordering and warning message of the remaining.

Part 3

For BKK Bank Intranet, BKK Bank would like to see search engines. BKK Bank need to be able to customize the users's needs by searching for concepts and ideas.

APPENDIX A

DATABASE DESIGN

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DATABASE DESIGN

Table A.1. Brorder Table.

ชื่อเขตข้อมูล	ชนิดข้อมูล
ID	AutoNumber
Date	Date/Time
Title	Text
DateOrder	Date/Time
ProductName	Text
ProductDetail	Text
Items	Number
NumerativeNoun	Text
UnitPrice	Number
Status	Text

Table A.2. Employee Table.

ชื่อเขตข้อมูล	ชนิดข้อมูล
EmployeeID	AutoNumber
Title	Text
FirstName	Text

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Table A.3. Product Table.

ชื่อเขตข้อมูล	ชนิดข้อมูล
CategoryName	Text
ProductDetail	Text
ProductName	Text
NumerativeNoun	Text
Items	Number
UnitPrice	Text

Table A.4. Brpassword Table.

ชื่อเขตข้อมูล	ชนิดข้อมูล
ID	AutoNumber
Branch	Text
Uname	Text
Pword	Text

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APPENDIX B

COST OF NETWORKING, WEB SERVER AND SERVER SOFTWARE

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COST OF NETWORKING, WEB SERVER AND SERVER SOFTWARE

Table B.1. Cost of Networking.

Cost of Networking	
Deposits	50,000
Mutual Funds	50,000
Office Banking	50,000
Check-Catching Interbranch	30,000
Online – Inventories System	10,000
BKK Loans	5,000
Operations Division	5,000
Total	200,000

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Table B.2. Cost of Web server and Server software.

Server h'ware & s'ware	
Deposits	200,000
Mutual Funds	200,000
Office Banking	200,000
Check-Catching Interbranch	120,000
Online – Inventories System	40,000
BKK Loans	20,000
Operations Division	20,000
Total	800,000

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