Information and Document Sharing Using an Online Implementation Tool

by

Ms. Pathraporn Selanont

A Final Report of the Three-Credit Course
CE 6998 Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer and Engineering Management
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Project Title	Information and Document Sharing Using an Online Implementation Tool
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The Graduate School of Assumption University has approved this final report of the three-credit course, CE 6998 PROJECT, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.

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ABSTRACT

TPT Petrochemicals Public Company Limited was the first producer of Purified Terephthalic Acid ("PTA") in Thailand. The PTA plant of TPT is located in the Map Ta Phut Industrial Estate, Rayong province, where TPT is a part of Thailand's major petrochemicals industrial cluster. The company is mainly divided into Department/Division/Center according to its office location. There are many Divisions and Departments which are located in both Bangkok Office and Rayong Plant.

TPT shared information by posting soft file documents into the Network system for the current existing system. Each function, department, division and center has their own directory in network system which has authorized access for authorized person only. Each folder consists of confidential document and working file but sometimes it is lost due to system errors or human errors. There is no file management to track the file version and edit the file. Announcement or schedule of internal regular meetings is sent to audience by e-mail which bothers the receivers and sometimes they ignore these e-mails. The existing Network system is not so convenient to facilitate the information and file sharing which causes the working process delay.

Due to the limitation of the existing Network system, the information sharing service application named "Microsoft SharePoint Portal Server 2003" is introduced to serve the need to share the information throughout theorganization. This application also helps to create the center of information for the organization which helps to connect people from different locations, functions, departments and divisions to share knowledge and information.

ACKNOWLEDGEMENTS

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I. INTRODUCTION

1.1 Background of the Project

As we are working in the organization that consists of many functions, departments and divisions which are located in Rayong for the Manufacturing Center and Bangkok for Business Center so they must have smooth information flow between them.

There are many divisions and departments located in both Bangkok Office and Rayong Plant. The Company mainly is divided into Departments/Divisions/Centers according to office location:

(1) Bangkok Office - Business Center and Shared Service Center

Business Center is responsible for marketing and sales and is also responsible for customer service and to be the contact point between the company and external customers. Shared Service Center such as Finance Division, Accounting Division, Information Technology Division, Legal Division, Corporate Planning Division, Human Resource Division and Purchasing Division are working to support each division in Bangkok Office and Rayong Plant.

(2) Rayong Plant — Manufacturing Center

Manufacturing Center consists of Production Division, Engineering Division, Maintenance Division, Plant Affairs Division (consists of Shipping and Packing Department) and TPTUC Operation Division. All mentioned division and department of Manufacturing Center are working to support each other to produce PTA to fill in the request order from the Business Center.

We shared information by posting soft file documents into the Network System. Each function, department, division and center has their own directory which has authorized access

for authorized persons only. Each folder consists of confidential documents and working file but sometimes it is lost due to the system errors or human errors.

Some information must be shared and updated by different functions and some are needed only for reference or for further information. As people can access the directory for their own functions only so they have decided to share the document file by e-mail. After finishing updating file, people send the document file back to authorized persons by e-mail to save this file into the directory. It is hard to identify who is the real person who had done or updated the document file.

One document file is needed to update by many authorized persons, when one person is working on the document or forgets to close and save the document file the other cannot do anything to the document file. It is quite difficult to track as the system does not show the name of persons who are working on the document.

There are several types of documents used throughout the company. Some document files are sent through e-mail or some are sent by internal messenger due to the large size of document file which cannot be sent through e-mail. Sending documents by internal messenger takes time of 1 to 2 days to arrive which causes delay to proceed to next process.

There are many folders created under each directory, sometimes people save document files in wrong folders. It is a tough job for persons who have to gather all documents to search through all folders in directory.

1.2 Objectives of the Project

The objectives of the project are as follows:

(1)   To reduce the paper flow between each section / department / division / center in the organization as we are now in paperless world.

(2)   To provide convenience to share information for user from different department or section with located in different places.

(3)   To share announcement of news, event, activities, knowledge

(4)   To implement Microsoft Portal SharePoint in order to remove the obstacles and

problems caused by using Network system.

1.3 Scope of the Project

This project proposal is to improve information sharing and document flow in the

organization between function / department / division by implementing Microsoft Portal

SharePoint to improve the existing Network system.

II. THE EXISTING SYSTEM

2.1 Background of the Organization

TPT Petrochemicals Public Company Limited was the first producer of Purified Terephthalic Acid ("PTA") in Thailand. PTA, produced from Paraxylene, and Monoethylene glycol ("MEG") are the two principal raw materials used to produce polyester, which is a principal feedstock used by the textile industry to produce fibers and yarns. PTA is also used in the manufacture of PET (Polyethylene Terephthalate) bottles, microwave utensils, x-ray and photographic film, containers, and certain products used in the automobile industry, such as car parts and roof linings, and hygiene industries, such as diapers and sanitary napkins.

PTA plant of TPT is located in the Map Ta Phut Industrial Estate, Rayong province, where TPT is a part of Thailand's major petrochemicals industrial cluster. TPT production capacity is 420,000 tons per year.

PTA plant is powered by an on-site cogeneration plant, which is owned and operated by our subsidiary TPT Utilities. Although our principal product is PTA, our cogeneration plant - TPTUC also generates utilities, namely, power, steam and de-ionized water (together, "utilities') not only to support the production of PTA, but also to cater the needs of neighboring plants. In particular, TPT sell excess electricity to Tuntex (Thailand) PCL and EGAT. TPT sell any excess steam to Tuntex (Thailand) PCL and Bangkok Polyethylene Public Company Limited. TPT also sell excess clear water and de-mineralized water to Tuntex (Thailand) PCL.

2.2 Current Problems and Areas for Improvement

As mentioned above in the first section for the intention to share information throughout the organization, confidentiality, safety and stability of the document should be important things to consider.

In the existing Network System, each directory can be accessed by authorized persons only. If anyone who wants to access to the directory, he / she must ask for permission from the directory owner then inform IT help desk to set the authorized access. If permission is deny by directory owner, the needed document file can pass to the person who needs it via e-mail which is not convenient and also is time consuming.

If people are working on the same document file, there must be many versions to it. It is quite complicated for the end user who uses the information to track the latest version and find out who is the one to update the document file.

Some announcement or schedules of regular meetings is sent to the audience by e-mail. These bother the audience to send e-mail too often to their mail box. If we have the center to post all announcements or schedules, these would be more convenient and increase information reliability.

Each function, department, division and center has their own directory which cannot be accessed by other unauthorized users, it is also the obstacle for information sharing which is time consuming and delays the next process of other sections.

2.3 Existing Computer System

In the Network System, all files are kept in different path drives. Each drive has its owner i.e. Finance Division, Accounting Division, Corporate Planning Division, Production Division, Maintenance Division etc.

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In Managing Authorized Access, when drive owner/ directory owner want to save the file or want to retrieve file from his/her drive, the system will check for the authorized access. If user has authorized to access the drive, he/she can directly enter the drive. For non-directory owner, they will send the request for file usage or request to save the file into the directory owner's drive. Then directory owner may allow or deny the request up to the reason for file usage. If the access allows non-directory users, he/she can retrieve the file or save file into the system.

In "Manage Directory" Folder process, all files from directory owner and non-directory owner who have authorized access are saved in the system. For file usage request, both directory owner and non-directory owner can directly retrieved file from the system.

In "Manage Updated" File, all updated files sent by non-directory owner are saved into the system. The entire file must be checked by directory owner. If is some files need correction, the directory owner will send file back to the sender for correction until the file is accepted by the directory owner.

As you may see that the process goes back and forth which can cause conflict of communication between parties at any time. These also waste the time to send the request and wait for directory owner to confirm back.

2.3 Existing Computer System

Figure 2.1. Context Data Flow of the Existing System

7

Directory Owner

Request to use file,A
Request to save
file in other
directory

File, Updated file,
Request for
document retrieve

Request for file usage I"

1.0

Access deny

Check Authorized Access

Non-Directory
User

Access allow

Manage
Authorized
Access

'1 DI

Authorized
Access Database

Updated file, File to be
saved in other
directory

File, Updated file

Non-Directory
User

Requested File

2.0

File to be saved in
directory, Request for
file usage

Manage
Directory
Folder

Directory Owner

Requested File

Requested File

D2 1-ifeoT1TiTctory
Database

Updated file

3.0

Request for
Updated File

Non-Directory
User

Manage
Updated File

Inform incorrect
detail in updated fil

Updated file

Updated file

Accept Updated file,
Inform incorrect detail
in updated file

Directory Owner

Figure 2.2. Data Flow Diagram Level 0 of the Existing System

Non-Directory
User

Request to use file,
Request to save
file in other
directory

Access deny /
Access allow

Request to use file, Request to
save file in other directory

Manage
Unauthorized
Access

Access deny /
Access allow

Add Authorized
Access

D1   Aut orized Access
         Database

Directory Ownerr

Check Authorized
Access

Updated file,
File to be
saved in other
directory

1.2

File, Updated file,
Request for
document retrieve

Non-Directory
User

Gather File /
Document
Before Process

File, Updated file

2.0

Manage
Di rectory
Folder

Figure 2.3. Data Flow Diagram Level 1 of Manage Authorized Access

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1.0

Manage
Authorized
Access

File, Updated file

2.1

Classify
Document / File
Received

File to be saved
in directory

File retrieve
request

D2

File of Directory
Database

2.2

Request for file
usage

Manage File
Receive Request

Requested file

Updated file

Request for
updated file

3.0

Requested File

Requested File

Manage
Updated File

Non-Directory
User

Directory Owner
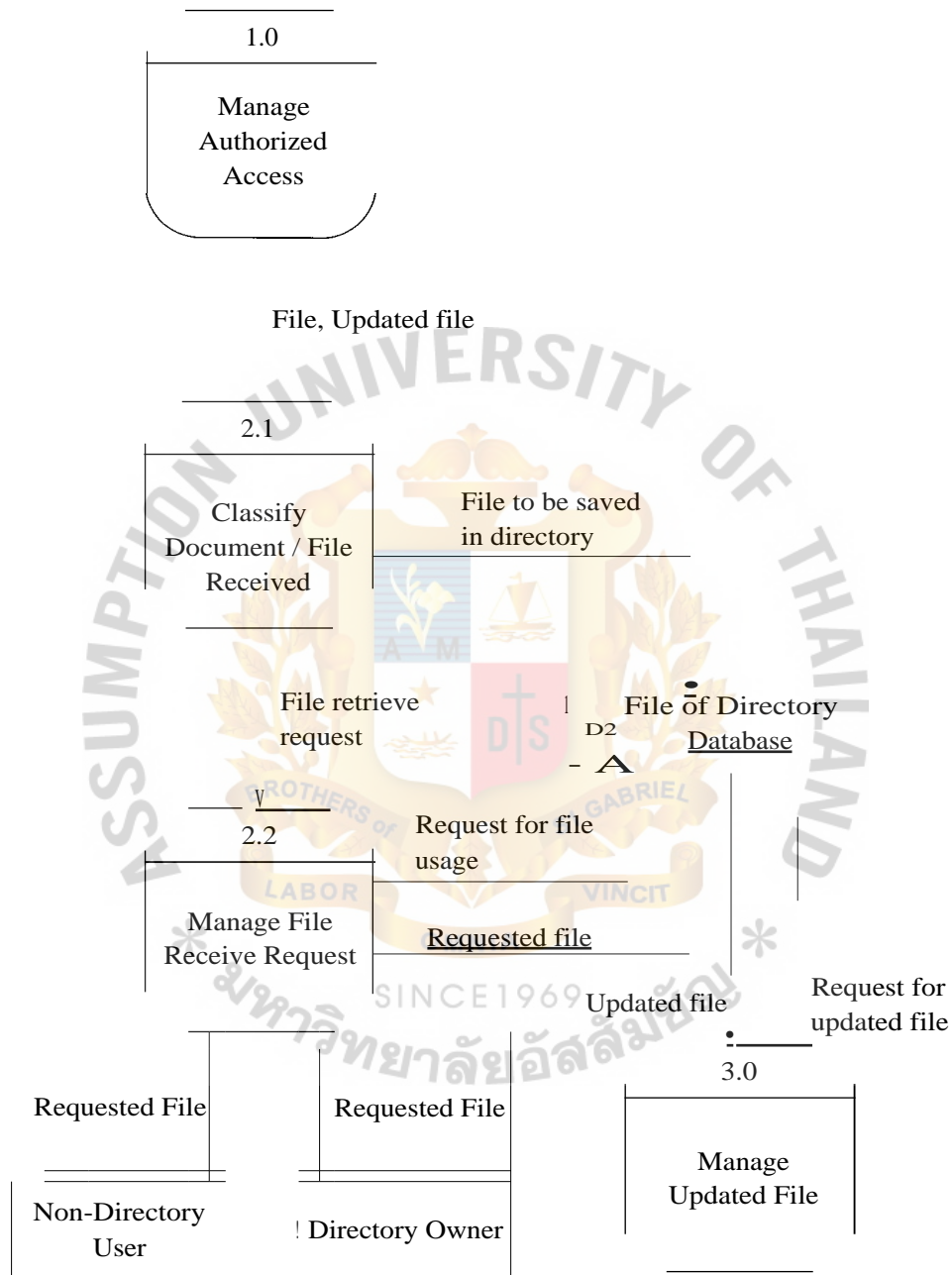
Figure 2.4. Data Flow Diagram Level 1 of Manage Directory Folder

31Wi *c* **i**

2.0

Manage
Directory Folder

File to be saved
in directory,
Request for file.
usage

3.1

| Non-Directory User | Updated file | Manage Received Updated File | Updated file | Requested file |

File of Directory
Database

D2

Inform incorrect
detail in
updated file

3.2

Request for !
updated file

Directory Owner

Manage File
Checking of
Updated File

Updated file

4

Updated file

Accept Updated file,
Inform incorrect detail
in updated file

Directory Owner

Figure 2.5. Data Flow Diagram Level I of Manage Updated File

III. THE PROPOSED SYSTEM

3.1 System Specification

Due to the limitation of the existing Network system, the IT Division proposed the information sharing service application named "Microsoft SharePoint Portal Server 2003" to serve the needs to share the information throughout organization. Microsoft SharePoint Products and Technologies facilitate collaboration within an organization. Using the combined collaboration features of Windows SharePoint Services and SharePoint Portal Server 2003. users in organization can easily create, manage, and build their own collaborative Web sites and make them available throughout the organization. This applic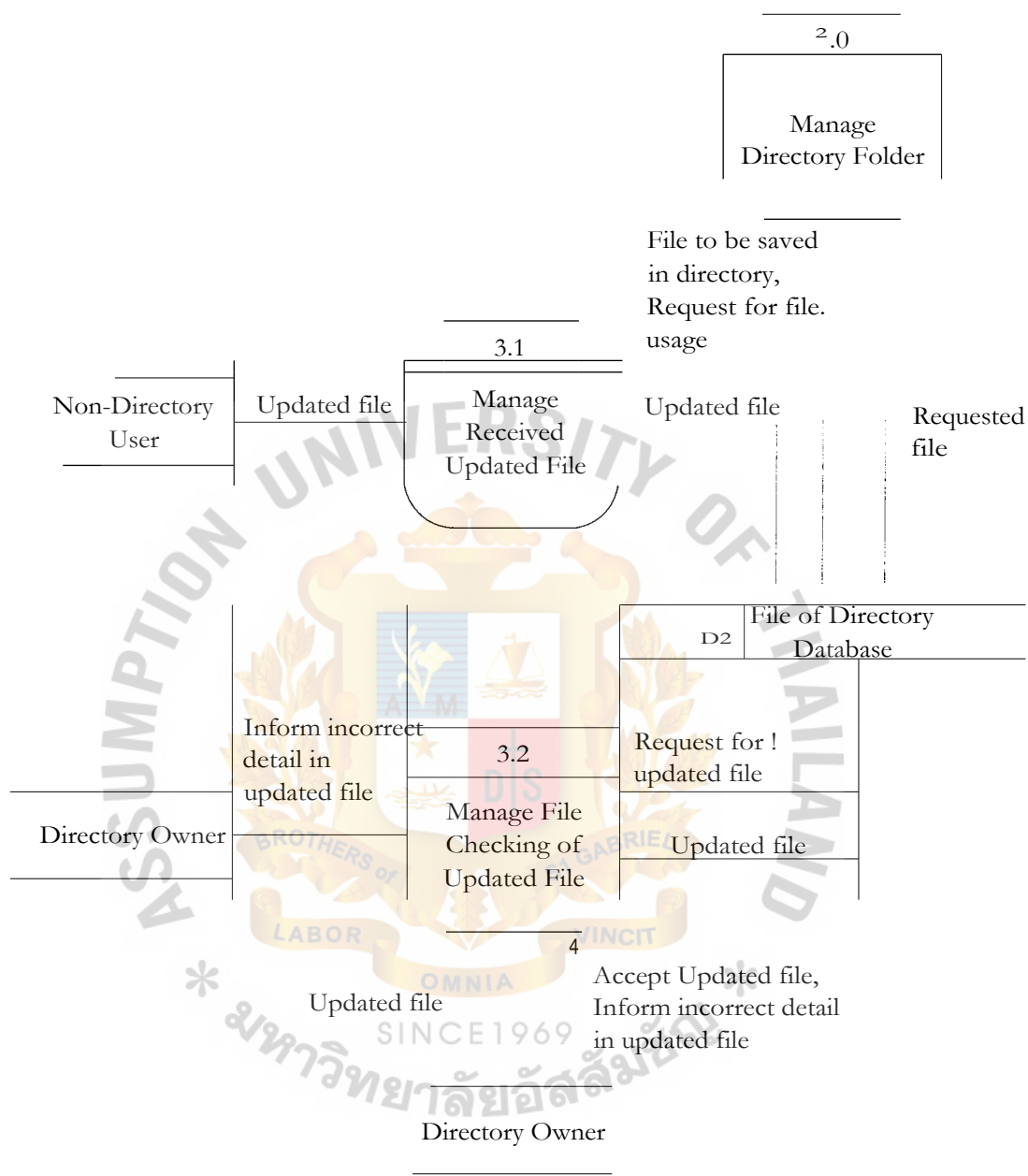ation also helps to create the center of information for the organization which helps to connect people from different locations, functions, departments and divisions to share knowledge and information.

Before the system configuration phase, system initiator consists of team and site managers must list out what information is widely shared among people in the organization and what articles, news, announcement, activities, training handouts, etc are needed to publish to all people in the organization. Then comes the Configuration phase, system administrator creates the sub area under each main area and also sets the authorized access for each sub area to clearly identify the group of users for each area.

Every user must enter the Portal Sharepoint main page which shows the organization schedule, news and hyperlink to other sub area. Users can enter to each sub area that they have authorized to enter and have authorized to post or delete file under their working area.

As confidentiality, safety and stability of the document should be important things to consider, confidential document is safely protected under the restriction area that only authorized person can enter to post or delete the file under he/her working area.

As system administrator firstly sets the group of authorized persons for each area since the configuration phase there is no problem for non directory owner to retrieve files from other directories. No need to waste time to send request or e-mail to ask permission to retrieve the file for usage. Non directory users can directly access the shared working area.

When users need to work on documents, the system will show file, date, time and name of persons who previously edited the document. If someone is working on the document, the status of file will show the names of persons who are working on that document. This helps to identify the document version and who is the one who previously works on the document.

Organization schedule also can be posted on the main page of Portal Sharepoint together with news, events and internal activities. These would be more convenient and also increases information reliability.

3.2 Proposed System

In Microsoft Portal SharePoint, the system administrator will set the authorized access for each user during the system configuration phase by referring to the authorized access documents that are listed and surveyed by system initiator.

User must log-in by entering username and password then this information will be checked with the system database in order to identify the scope for entering the Portal SharePoint for each user. If username and password is incorrect, it means the user must contact system administrator for username and password registration.

In Managing Information Sharing Process, the system will identify each user's right to access the area inside the Portal SharePoint. (Notice: each user has different authorized to manage same file. Some can view only, some can edit and view the file). The user can retrieve file in any area if he/she has authorized to use that file so there is no problem for

non-directory owner to bother the directory owner by sending the request to use/retrieve file. Microsoft Portal SharePoint helps to save time and makes the file retrieve process faster.

In Manage Updated File/Edited Document, all updated file are saved in the appropriate area. Editor's name, date and time also show beside the file name in order to identify who is the person who saves the document. Microsoft Portal SharePoint has the historical records of each file to indicate the version of the file so it is easy for the area owner to track the file version, person who edit, date and time. The system will send the updated notice to the area owner informing the updated version of the file.
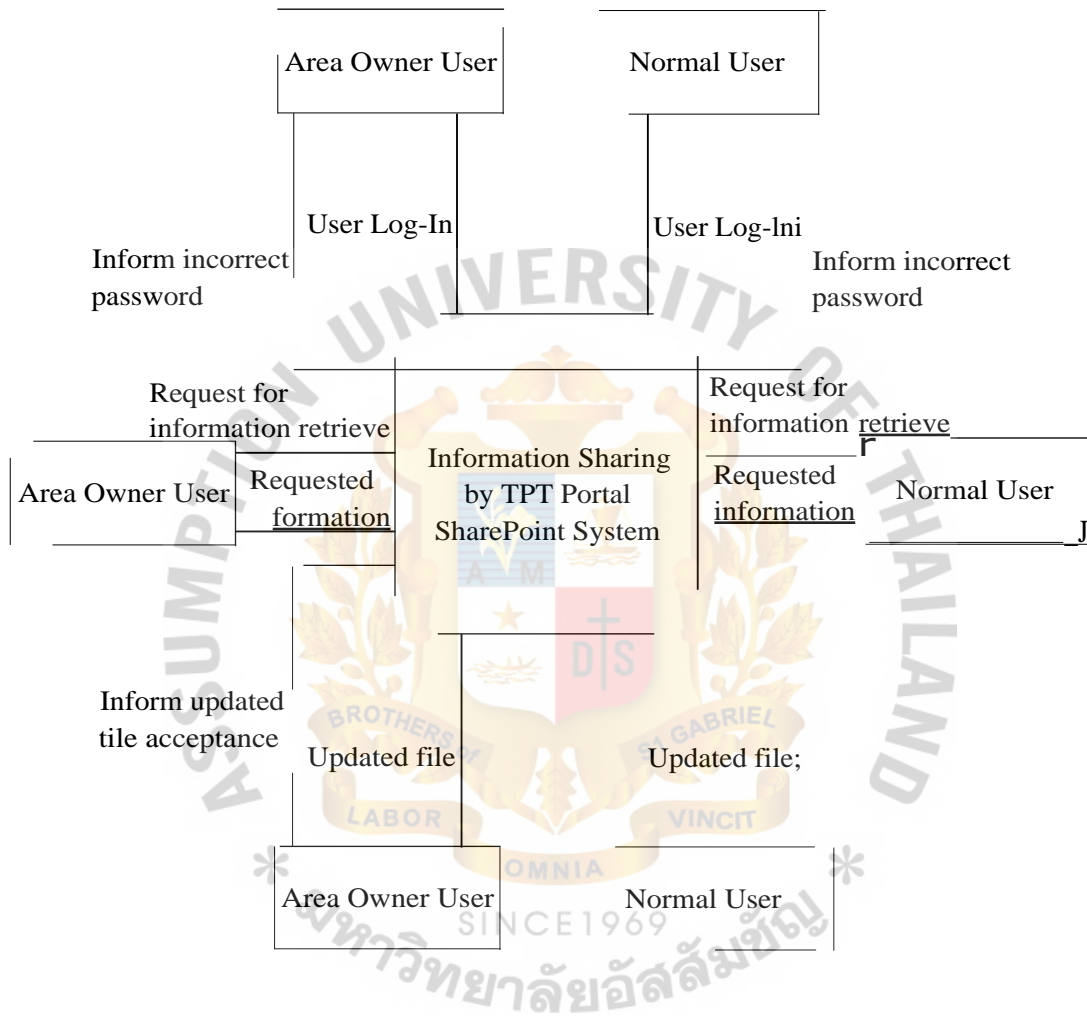
3.2 System Design

Figure 3.1. Context Data Flow of the Proposed System

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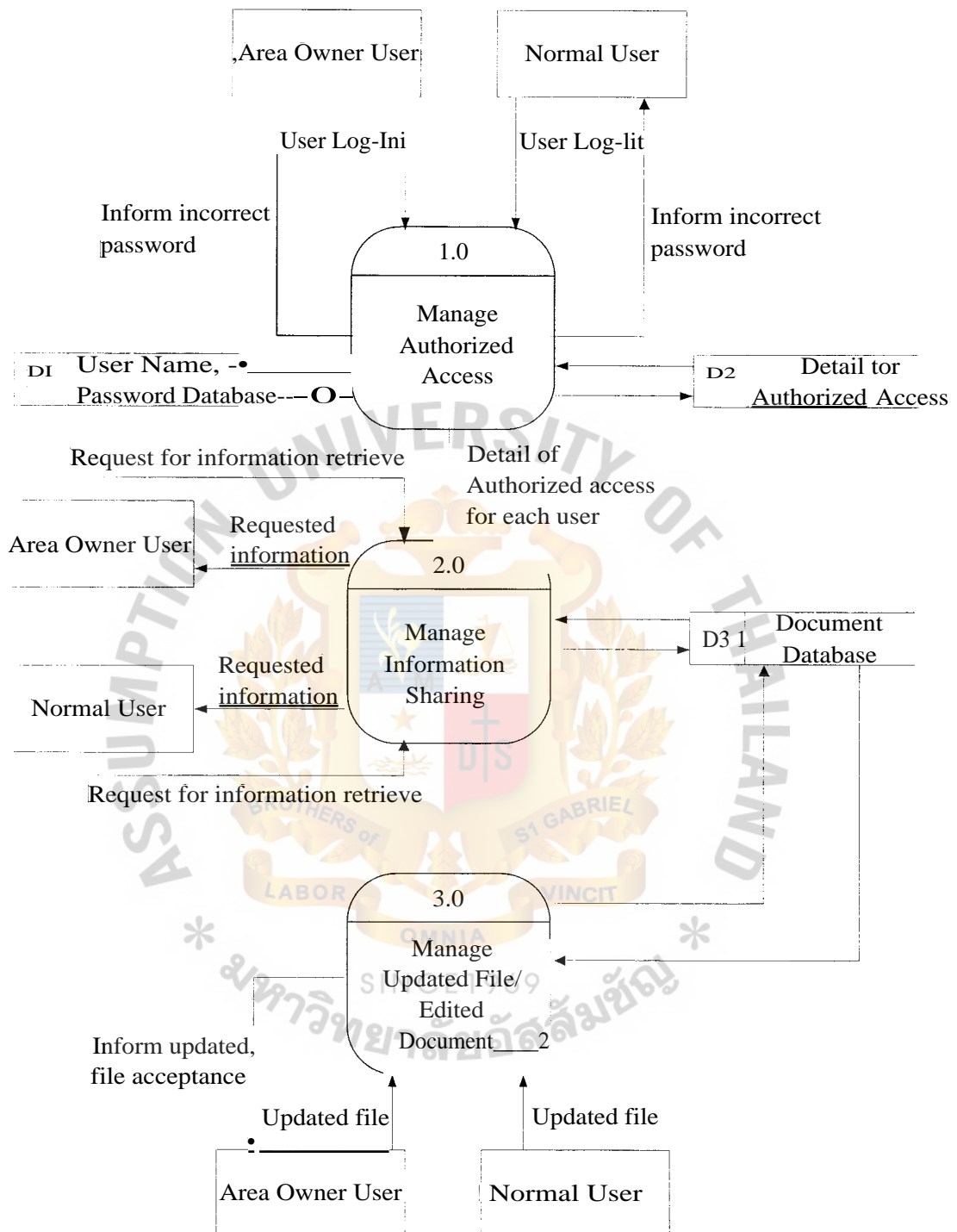
Figure 3.2. Data Flow Diagram Level 0 of the Proposed System
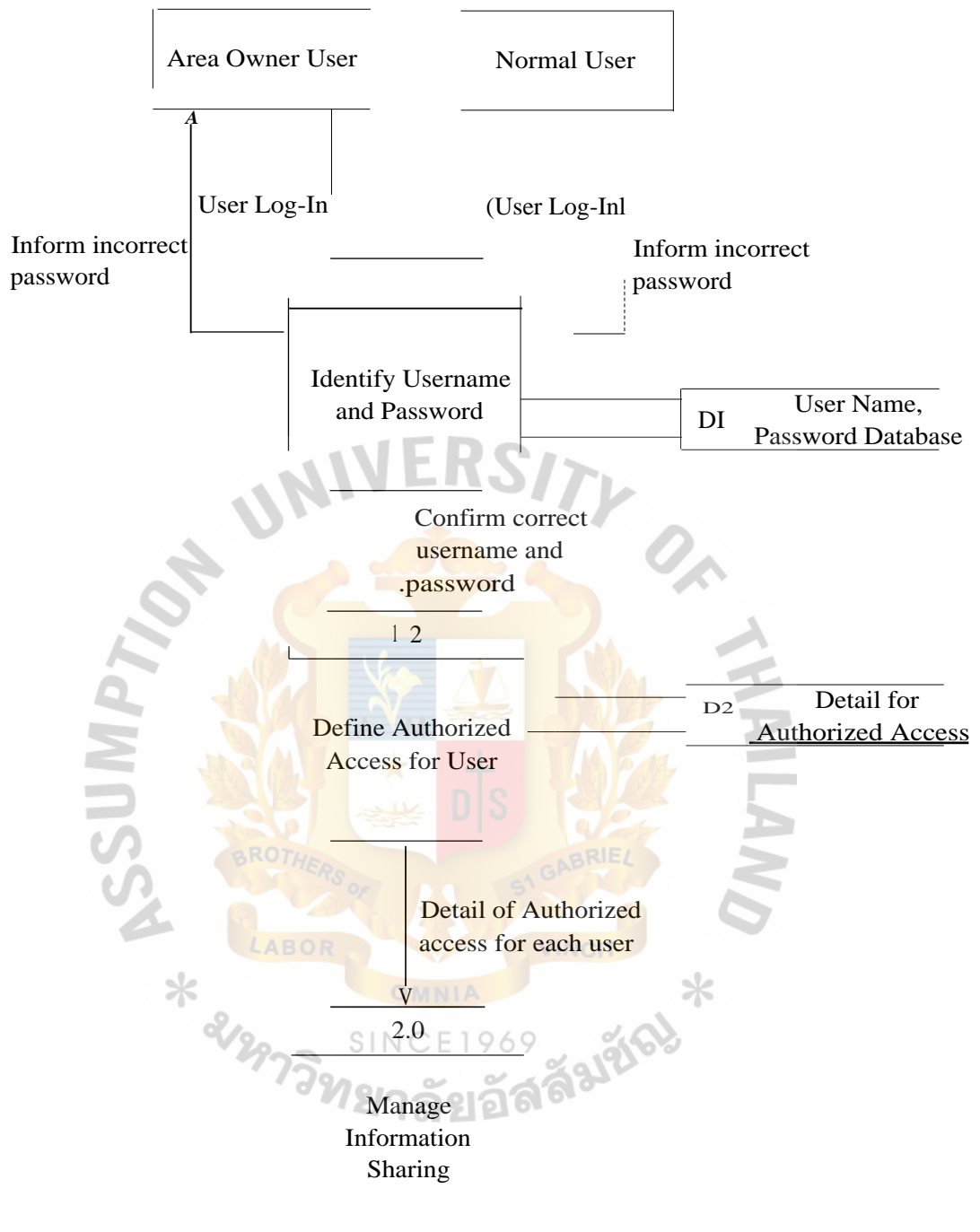
Figure 3.3. Data Flow Diagram Level 1 of Manage Authorized Access
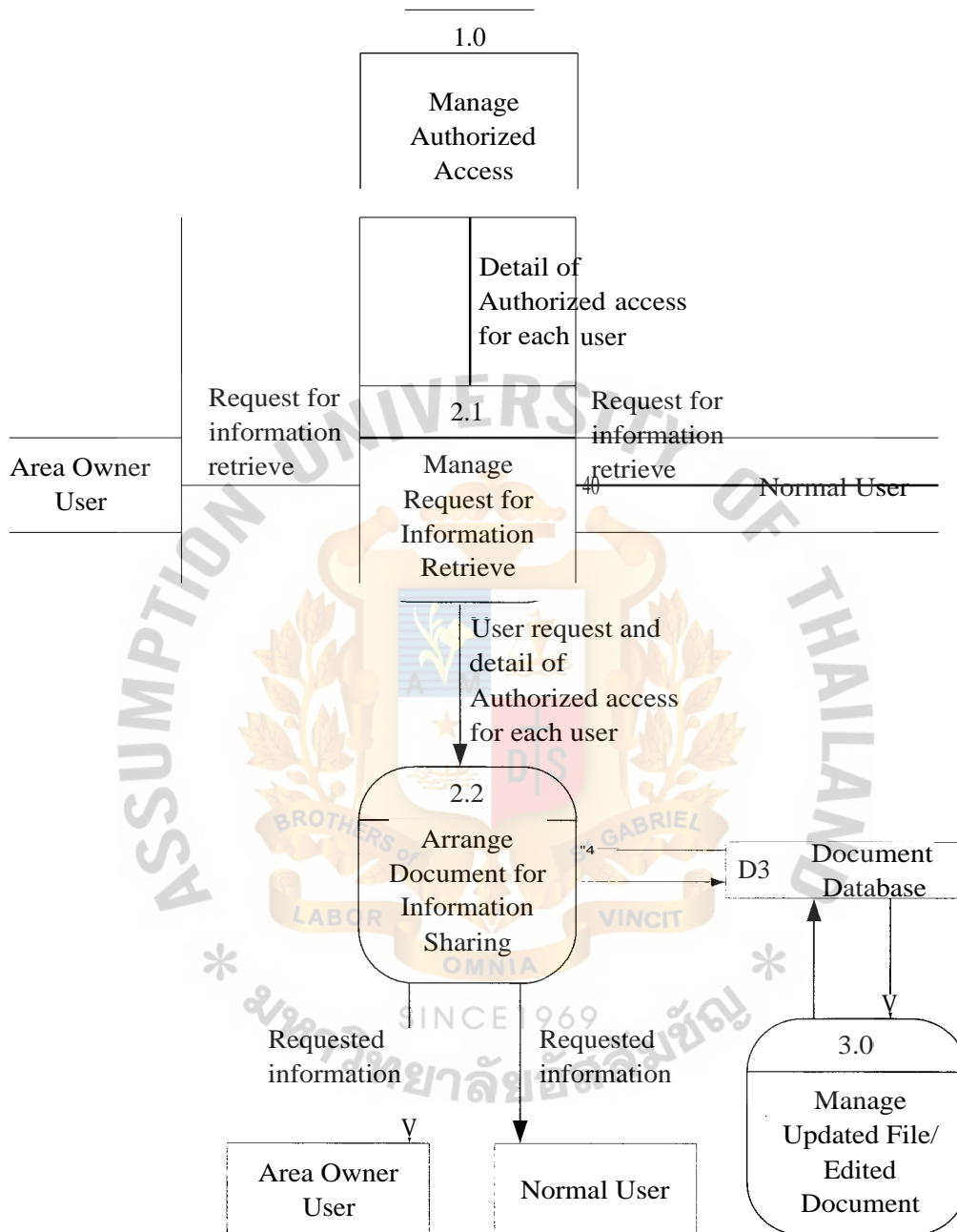
Figure 3.4. Data Flow Diagram Level 1 of Manage Information Sharing
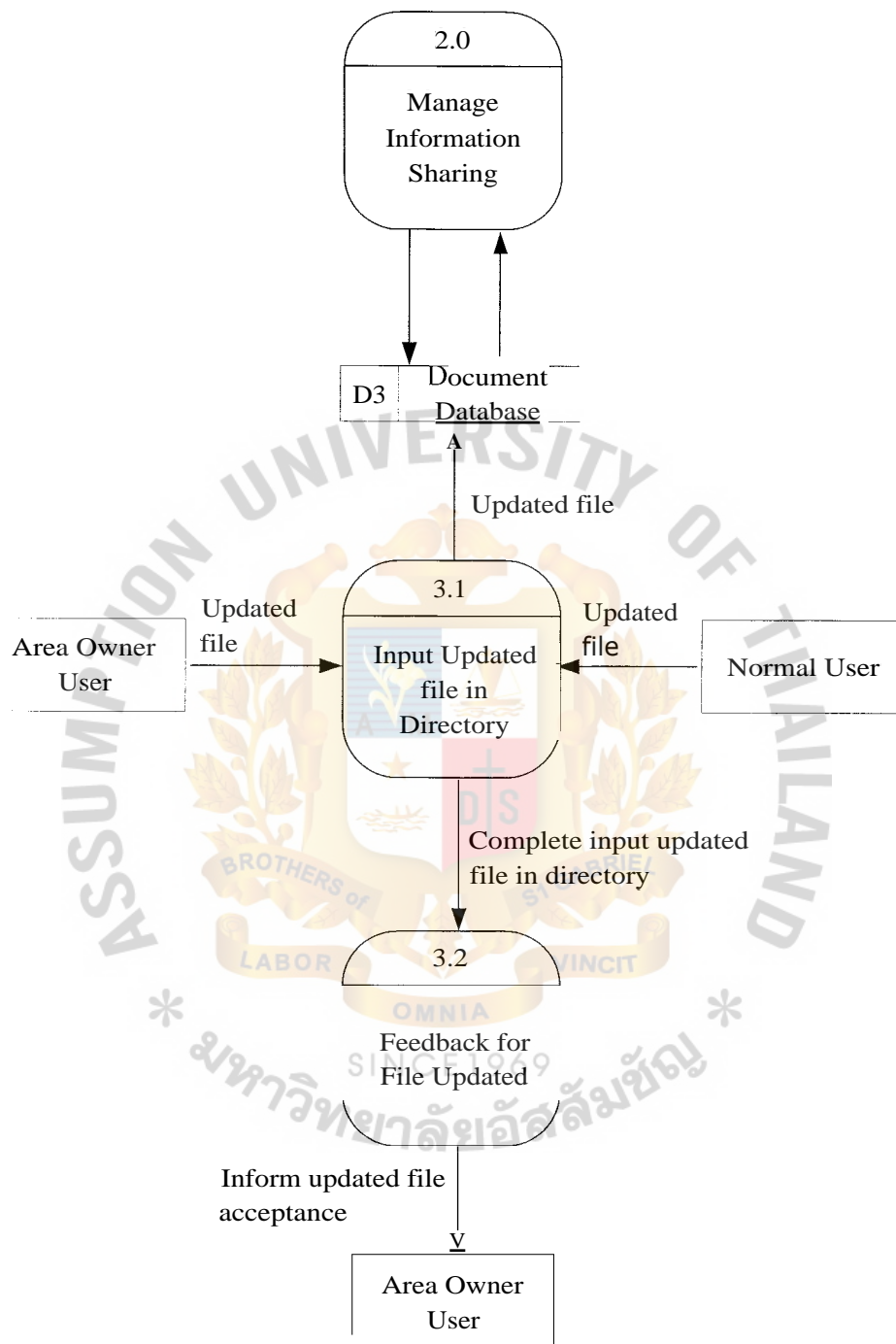
Figure 3.5. Data Flow Diagram Level 1 of Manage Updated File / Edit Document

3.3 Hardware and Software Requirement

The hardware and software specification of the proposed system for Information and Document Sharing are shown in the below Tables:

Table 3.1. The Hardware Specification for System Server as Web Front End Server

Hardware	Specification
CPU	Dual Intel Processor XEON 2.8 GHz
Memory	At least 2 GB
Hard Disk	Hard Disk HotSwap 18.2 GB x 4
DVD-Rom Drive	4X
Network Adapter	10/100/1000 MHz

Table 3.2. The Hardware Specification for the System Server as Database Server

Hardware	Specification
CPU	Dual Intel Processor XEON 2.8 GHz
Memory	At least 2 GB
Hard Disk	Hard Disk HotSwap 18.2 GB x 4
DVD-Rom Drive	4X
Network Adapter	10/100/1000 MHz

Table 3.3. The Software Specification for the System Server as Web End Server

Software	Specification
Operating System	Microsoft Windows Server 2003, Web Edition with Service Pack
Web Server	Microsoft Internet information Services (IIS) 6.0
Application Server	Microsoft Office SharPoint Portal Server 2003

Table 3.4. The Software Specification for the System Server as Database Server

Software	Specification
Operating System	Microsoft Windows Server 2003, Standard, Enterprise Edition with Service Pack
Web Server	Microsoft Internet information Services (IIS) 6.0
Application Server	Microsoft Office SharPoint Portal Server 2003
Database Server	Microsoft SQL Server 2000 Desktop Engine (MSDE 2000), Microsoft SQL Server 2000 Standard Edition or Enterprise Edition

One thing to note is the server that is installed Microsoft SharePoint Portal Server 2003 application must be a member in the domain of Microsoft Windows NT 4.0, Windows 2000 or Windows Server 2003.

Table 3.5. The Hardware Specification for Each Client Machine

Hardware	Specification
CPU	486 Dx4-100, Pentium, or higher
Cache	256 KB or higher
Memory	64 MB or higher
Hard Disk	5 GB or higher
CD-Rom Drive	1X or higher
Floppy Drive	1.44 MB
Network Adapter	Ethernet 10-Base T
Display Adapter	SVGA card
Display	14" SVGA Monitor

Table 3.6. The Software Specification for Each Client Machine

Software	Specification
Operating System	Microsoft Windows 2000 or higher
Web Browser	Microsoft Internet Explorer 5.01/5.5/6.0 with latest Service Pack Version
Application Software	Microsoft Office XP Professional Edition, or higher

SQL Server   SharePoint Portal Server 2003

Index and Job SQL Server 2000

\ el) Server

Web Server

Web Server

File Server Exchange Server

Active Directory

Internal Zone
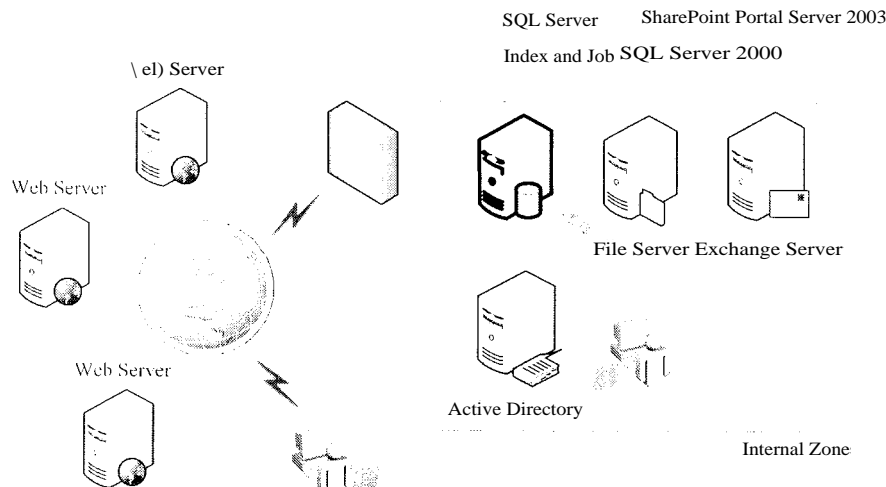
Figure 3.6. Sample Network Diagram

3.4 Security and Control

SharePoint Portal Server 2003 is a secure, scalable, enterprise portal server built upon Windows SharePoint Services that you can use to aggregate SharePoint sites, information, and applications in your organization into a single, easy-to-use portal. In addition to the features of Windows SharePoint Services, SharePoint Portal Server 2003 includes the following features that facilitate and support security and control for application usage:

(I) News and Topics

Only authorized persons from each function can have the right to post news or create necessary topics that needed to pubish to other function audiences for announcement or information sharing.

(2) My Site, with personal and public views

Each user have his/her own database space to put personal information into system which is called "My Site". User can choose whether to allow which part can view by public or which part is for site owner to view only.

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(3)   Information targeted to specific audiences

The name and group of people who have the authorization to access each working area is set by the system administrator. Working area owner will send group of person's names who have the right to access, add, update and delete the files to system administrator to register and set the authorization in order to avoid the unauthorized users to access the confidential information.

(4)   Powerful indexing and searching across file shares, Web servers, secure Web servers, Exchange Public Folders, Lotus Notes, and SharePoint sites

To enhance the ability to reach information inside the system which facilitates the usage of users when the location of needed information is unknown. Some restricted working area may not show in the list of search results.

(5)   Alerts that notify you when changes are made to relevant information, documents, or applications

When there is some change made to relevant information, documents, or applications there will be an alert to notify change to the information owner. This help to identify who is the one who make change and easy to track the version of the document.

Windows SharePoint Services can scale to thousands of sites within an organization. It fully supports load-balanced Web farm and clustered database deployments. For site and server managers, quotas can be set and enforced not only on storage, but on sites per-server and users per-site. Site usage can be monitored to detect and retire inactive sites. Detailed security options are available and easily managed. Server managers can delegate to end users

the ability to create their own sites. Sites and servers can be managed from a Web browser, command-line tools, or a Web service-accessible object model.

3.5 Cost and Benefit Analysis

(1) Costs of Existing System

As users keep all soft files in Network System by storage working file in individual function working drive (please refer to the below figure).

Figure 3.7. Example of Drive in Network System

The space of the server is one of the important factors for the cost consideration. If users need more space in server to keep the file, there are two ways to manage. One is to delete some old files that no longer use, there is no cost occur for file deleting from

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the server as this is the service from server administrator, second is to increase the server space in order to keep all files according to the drive owners' needs. IT Division will be responsible for this matter.

About the cost for increasing server space is up to the cost of the server hard disk which will vary on market price. The table below is a sample price quoted from IBM dealers for different hard disk options.

Table 3.7.   Sample Cost of Hard Disk for IBM Server X-series 346, Baht

Hard Disk Specification	Price (Baht)
IBM 73.4 GB Hot Swap U320 10 K	12,900
IBM 146.8 GB Hot Swap U320 10 K	19,600
IBM 300 GB Hot Swap U320 10 K	48,900

There should be some maintenance for the hardware as some equipments may not work efficiently due to long life usage and some defects which could occurred. There must be replacement of the defective hardware that the amount of cost incurred is up to the price of a new equipment purchased.

(2) Costs of Proposed System

The costs to implement Portal SharePoint including Implementator Investment and Hardware Investment, as there is no cost of License Investment as TPT has already purchase Microsoft Volume License(cost is about 30% of the total cost of investment), is shown below in Table 3.8., Table 3.9. and Table 3.10. for details on investment.

Table 3.8. Implementation Investment

Item	Description	Unit Price (THB)	Qty	Total Price (THB)
Service:				
1	Server Installation at Head Office per above scope of work include • 1 Corporate Portal and 5 Project Team Site • 1 class of Super Users training • 1 class of Administrators training (Exclude others 3rd Party Product, such as Backup Software, Antivirus)	550,000	1	550,000.-
2	Maintenance 1 Year agreement • Phone support on 8x5 by certified system engineer • 5 incidents for 24x7 services (on-site support) • Quarterly visit for preventive maintenance	125,000	1	125,000.-
			Total	675,000-

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Table 3.9. Hardware Investment

Item	Description	Unit Price (THB)	Qty	Total Price (THB)
Hardware : For SharePoint Portal Server and SQL Server				
1	• IBM xSeries 236: - Intel Xeon 3.0 GHz.with EM64T, 1 MB L2 Cache - 1 GB PC3200 DDR2-SDRAM DIMMs / 16 GB max. - Dual Channel Ultra320 SCSI Controller - Dual 10/100/1000 Gigabit Ethernet Controller - 1 x 670W Hot Swap Power Supply / Max. 2 - 3-Yr On-site Warranty Option • 73.4 GB Ultra320 SCSI Hot-SwapHDD(10K) • ServeRAID-7k Adapter Card with 256 MB • 670W Hot Swap Power Supply (for xSeries 236) 3 Years Parts&Labor:24 Hours x 7 Days • 4 Hours Response (Bangkok only), On-Site Service	170,500-	2	341,000-
			Total	341,000-

Table 3.10. Investment Summary for Portal SharePoint

Item	Description	Unit Price (THB)	Qty	Total Price (THB)
I.	Implement Investment	675,000	1	675,000-
2.	Hardware Investment	341,000	1	341,000-
			Total	1,016,000-

For sonic maintenance costs which may happen in the future is up to the cost of hardware equipment that needs to be replaced and also the hard disk cost if there is more server space required within the future.

Network Administrators of existing systems are trained to be Portal SharePoint Administrators according to the training course provided by Portal SharePoint consultant and technician so there is no need to increase man power to serve proposed system. All IT Division staff and Corporate Planning staff are trained to be key user and help desk at the same time. Portal SharePoint can speed user's adoption and lowers training costs by using a familiar browser interface and allowing users to perform portal tasks within their Microsoft Office System programs.

There are many files that flow inside the organization due to the internal regular meeting of TPT such as Board of Directors Meeting, Monthly Management Meeting, Key Performance Indicators Committee Meeting, Production Meeting, Yearly Budget Revision and Performance Review. During the period of parallel conversion period, some pilot work space has created in order to try out the virtual situation for report submission such as Board of Directors Meeting Report submission. We got feedback from group of users who have to collect all files from each department and division in order to do document filling to submit

to Board of Directors. Functions in Portal SharePoint make file monitoring process easier as all files are kept in the appropriate workspace for each individual department/division only.

In the existing system, folders and files are mixed up between each department/division which causes confusing to Network Administrator in order to contact the file owner. There is no file and document management restriction so users are not aware of document security. Portal SharePoint seriously focused on authorized access for each workspace and sub-area as some area is restricted to top management and some authorized person only.

It is quite a waste of space in the existing system as some files are no longer used. System Administrator must check and try to manage the server space in order to serve the needs of users. It is very difficult to identify the file owner in existing system. System Administrator cannot delete some obsolete files to obtain more free space for new file storage. Portal SharePoint provides more help in file management which facilitates System Administrator's working process in monitoring the obsolete files to track the file version and always keeps the space available to serve users' needs.

Portal SharePoint is a bit costly at the first implementation phase but looks forward in the long run Portal SharePoint helps to facilitate working process and improves file and document management which reflects in efficient and effective working results.

IV. PROJECT IMPLEMENTATION

4.1 Overview of Project Implementation

As mentioned in the above part, the system initiator consisting of team and site managers must list out what the information is widely shared by each main function among people in the organization and what articles, news, announcement, activities, training handouts, etc are needed to publish to all people in the organization.

Windows SharePoint Services sites take file storage to a new level, providing communities for team collaboration and making it easy for users to work together on documents, tasks, contacts, events, and other information. In addition, team and site managers can coordinate site content and user activity easily. The Windows SharePoint Services environment is designed for easy and flexible deployment, administration, and application development.

In addition to the Web Part infrastructure, Windows SharePoint Services servers, sites, and site contents are exposed by a comprehensive Windows .NET—based object model and industry-standard Web services. Site customization and enhance data-driven site content is possible, even to non-programmers, by using Microsoft Office FrontPage 2003.

SharePoint sites are made up of Web Parts and Windows ASP.NET-based components. Web Parts are designed to be added to pages and configured by site administrators and users, creating complete page-based applications. Windows SharePoint Services are shipped with a number of ready-to-use Web Parts; more will be available in the future from Microsoft and third-party vendors.

Figure 4.1. Portal SharePoint Main Page

4.2 System Configuration

In order to accomplish the goals and objectives, it is necessary to clearly identify the scope of work for system configuration phase in detail as follows:

(a) Information and Requirement Gathering, Analyze and Design(Hardware)

Objective : Team introduction and clarify Portal Requirements

Tool : Requirement Check List and Prerequisite Check List

This phase consists of the following tasks:

1) Conduct Project Kick off Meeting

2) Provide main contact for service

3) Coordinate with TPT Petrochemicals PLC. to arrange the project schedule and contractual responsibilities (Specified the Date and Time for Project implementation)

4) Requirements verification and Prerequisite Check for Implementation

5) Analyze and Design Hardware and Software Requirements, including Server Functional design (Front-end Web, Search, Index, Job Server, SQL Server)

Microsoft SharePoint Portal Planning(Software), Corporate Environment

Objective : Planning for each Portal component, and readiness check in term of Software Functions

This phase consists of the following tasks:

1) Planning Services Accounts for SQL Server and SharePoint Portal Server

2) Planning Administrator Accounts

3) Planning DNS Names

4) Planning IP Address and Additional DNS Entries

5) Planning the Portal

6) Planning Roles, Groups and Rights

7) Planning Search, which is include Content Sources, Indexes, Updating Content Source Schedule (Full Update, Incremental Update), Source Groups and Search Scopes

8) Planning Sub Areas

9) Planning Team Site (Team Sites, Configuring Search and Standard Web Part in Team Sites)

10) Planning Personal Sites (Prerequisites for "My Sites" , Standard WebPart in "My Sites" and Users Group in "My Site")

(c) Hardware and Software Implementation

Objective : To Install and Configure Hardware and Software for Portal

Production

This phase consists of the following tasks:

1) Install and Configure Hardware per SharePoint Portal Server requirements.

2) Install and Configure Microsoft Windows 2003 Server on Hardware setup.

3) Install and Configure Microsoft SQL Server 2000 on server.

4) Install and Configure Microsoft SharePoint Portal Server 2003 on server.

5) Create Portal on Microsoft SharePoint Portal Server.

6) Create 5 Team Site for Project Team.

(d) SharePoint Portal Design and Development (Prototype)

Objective : Create Prototype of Portal to verify the need and also to meet

requirements

This phase consists of the following tasks:

1) Create the Portal per the Requirements from Phase of Microsoft SharePoint

Portal Planning (Software), Corporate Environment

2) Approval from TPT Petrochemicals PLC.

4.3 Test Plan

It is important to test the entire integrated system. The system is checked against the system requirements originally defined in the analysis phase by running typical data through the system. The quality of the output is examined, and processing times are measured to ensure that the original requirements are met.

System administrators test the prototype by using the actual data with the system and also refer to the user requirement from requirement check list and prerequisite check list listed during the beginning phase of implementation.

4.4 Conversion

When the operation switches from using an old system to using a new system, conversion can be difficult time for an organization. Users need time to get used to the new system, and although every effort may be make to thoroughly test systems, conversion can hold some unpleasant surprises if certain bugs or problems have not been discovered earlier.

During first two months the parallel conversion technique is used, the old system is used along with the new system which minimizes risk when new system fails. This conversion technique helps the user to feel familiar with new system and also provide chance for on the job learning.
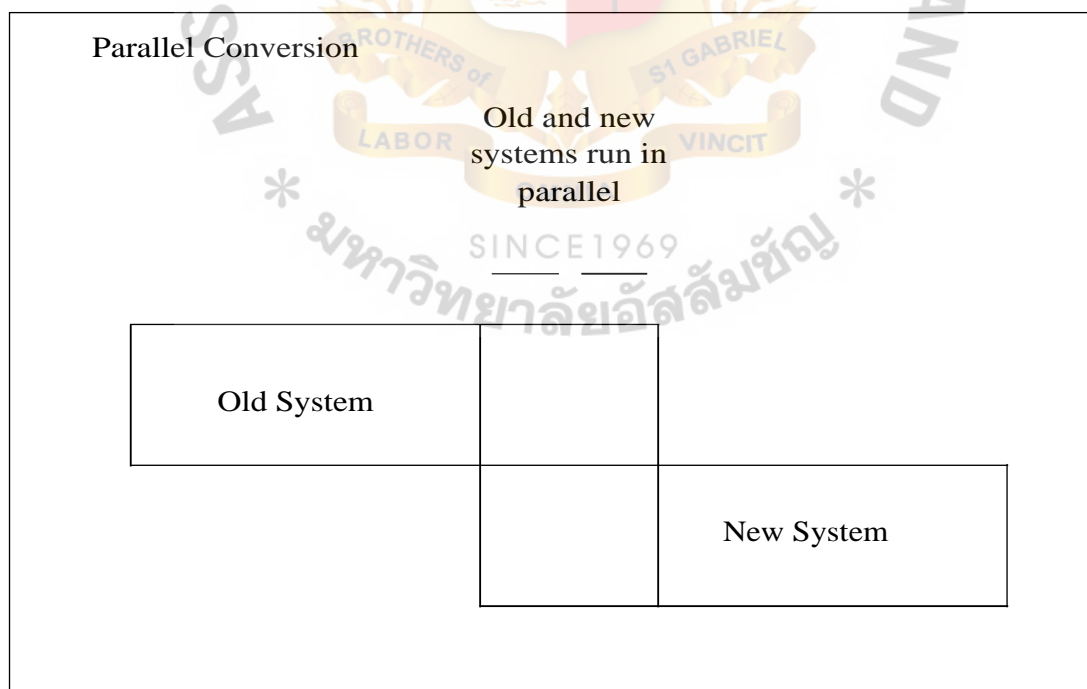
Parallel Conversion

Old and new systems run in parallel

Old System

New System

Figure 4.2. Parallel Conversion Model

4.5 Documentation

The documentation is prepared for both the Administrator and the User who want to learn about the various features of the application. Details in System Document are as follows:

(a)   Project Plan Document

(b)   Hardware and Software Recommendation for implementation

(c)   Final of Portal Requirements per Information gathering

(d)   Final of Portal Content Design

(e)   Microsoft SharePoint Portal Server 2003 Implementation

(f)   System Document and Manual CD

4.6 Training

In order to operate new proposed system, training will be conducted in class for administrators and super users in different session with different detail outline and also conduct the session for normal users in Bangkok Office and Rayong Plantsite.

The vendor also working side by side with super users during on the job training session in order to overcome the problems or errors that may not appear during the prototype testing phase. The details of training are as following:

•   Administrator Training and Users Training

    Objective : Skill Transfer to Administrator and Super Users

    Tool : Training Manual

    This phase consists of the following tasks:

    1) Provide Training and Manual for Managing and Working with Microsoft

       SharePoint Portal Server to Super Users as the following outline:

    1.1)   Configuring the Sites, which includes of

        1.1.1)   Planning a new Team Site

        1.1.2)   Create and Configuring a Standard Web Part

        1.1.3)   Create a Document Profile

    1.2) Adding Documents to the Portal, which includes of

        1.2.1)   Using, Configuring, and Administering Document Version

        1.2.2) Managing Content and Document Folders

    1.3)   Searching for Contents. which includes of

        1.3.1)   Performing Search by using the Portal Site

    1.4)   Using the SharePoint Portal Server, which includes of

        1.4.1)   Introducing SharePoint Technology

        1.4.2)   SharePoint Portal Server Discussions

        1.4.3)   SharePoint Portal Server Survey Forms

        1.4.4)   Alerts Feature in SharePoint Portal Server

        1.4.5)   Customizing the Portal Site and Team Site with Standard

            Web Part and Standard Team Site

2)   Provide Training and a Manual for Managing and Maintaining Microsoft
SharePoint Portal Server to Administrators as the following outline:

    2.1)   Outline as for Super User

    2.2)   Additional Topics as the following:

        2.2.1)   Backup SharePoint Portal Server

        2.2.2)   Restore SharePoint Portal Server

        2.2.3)   Assign Permission to Users

        2.2.4) Manages Team Sites and Manage Sub Area for Portal

3)   Provide Training and Manual CD 1 Set to Customer's Project Manager

V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

As TPT has many problems which occur in information sharing and file usage between functions, departments, division and center, the project of TPT Portal SharePoint was introduced and developed by the corporation of IT Division and Corporate Planning Division in order to facilitate the user's usage.

Microsoft Portal SharePoint can serve and answer the problems of the existing Network System and also meet the company's objective which mentioned in the first part of this report. There is less documentation and paper flow between each section / department / division / center and also facilitates the information sharing throughout the organization.

It is quite costly for the first time implementation for the cost of hardware and software. When we compare implementation cost with the functions and benefit of Portal SharePoint, it is worthwhile for the working process in both short run and long run. IT Division and Corporate Planning Division tries to push all users away from using Network System by providing instruction handout and also help desk service to serve user queries and problems.

There are some outstanding benefits of SharePoint Portal Server 2003 which influences the users using this new system which mentioned below:

(a) Create a complete view of user's business.

Access all of the information, documents, and applications that user uses through SharePoint Portal Server 2003. Find and reuse timely and relevant information from systems and reports, and quickly locate and access documents, projects, and best practices by searching or browsing—all through the portal

(b)   Put relevant information at user's fingertips.

Be more productive by having immediate access to up-to-date, relevant information. User can organize all of the information, files, and applications that he/she access throughout the day in a single view on My Site. With single sign-on, SharePoint Portal Server 2003 provides direct access to the sections of an application that most interesting for user—without having to remember a password.

(c)   Share knowledge across the organization.

Make it easy for business units, teams, and individuals to contribute content to the portal. Business units can integrate their SharePoint portal into the enterprise portal, enabling them to share knowledge with other business units. Teams can easily make the content in their Microsoft Windows® SharePoint Services sites discoverable through the portal through browsing or searching, and portal users can publish documents and best practices to the rest of the organization by adding them to the public view of their personal sites.

(d)   Find and make the most of organization's intellectual capital.

The industry-leading search technology in SharePoint Portal Server 2003 enables user to locate files, project plans, and best practices in file shares, Web sites, Microsoft Exchange Public Folders, Lotus Notes, Windows SharePoint Services sites, and databases instead of re-creating the wheel. Users can find more than just documents and Web sites; SharePoint Portal Server 2003 provides access to the people and teams that contribute knowledge to his/her organization. Links take users to My Site and SharePoint sites so that the user can investigate other contributions from the experts. Users can also organize information, files, and sites, enabling you to find a wealth of relevant information by browsing.

(e)   Find, aggregate, and provision SharePoint sites.

SharePoint Portal Server 2003 takes advantage of Windows SharePoint Services sites to create portal pages for people, information, and organizations. The portal becomes a collaborative experience by extending the capabilities of Windows SharePoint Services sites, enabling user to organize, manage, and provision SharePoint sites from the portal. Teams can also publish information in their sites, sharing their best practices with the entire organization.

(f)   Automate business processes.

SharePoint Portal Server 2003 helps relevant information find user through Alerts and Audience Targeting. Alerts notify users when any relevant file, SharePoint site, person, or application has been added or changed. SharePoint Portal Server 2003 can even alert user when a specific expert or team adds new information to the portal. Audience targeting enables IT groups to push relevant information and applications to a group of users with similar job roles, titles, or interests. Audience can be created from the Microsoft Active Directory® service, distribution lists, hierarchies, or any other criteria that the user defines.

(g)   Speed adoption by using familiar interfaces and tools.

New technologies often fail because they are too hard to use, and few employees have time to attend lengthy training courses. SharePoint Portal Server 2003 speeds user adoption and lowers training costs by using a familiar browser interface and allowing users to perform portal tasks within their Microsoft Office System programs, such as provisioning a Document Workspace, searching the portal, and receiving portal alerts in Microsoft Office Outlook 2003.

IT professionals can create Web Parts that expose information, applications, and Web Services by using familiar tools such as Microsoft Visual Studio® .NET and Microsoft Office FrontPage® 2003

(h)   Reduce development time and cost with out-of-the-box portal services.

Deploy SharePoint Portal Server 2003 right out of the box without any additional development work. Portal services such as search, SharePoint site management, topics, news, and My Sites are available immediately. Web Parts that provide read/write access to programs such as Outlook 2003 and Microsoft Office Excel 2003 are also available right out of the box, lowering user development costs.

(i)   Ease deployment with flexible options.

Regardless of whether user's organization wants to take a top-down or bottom-up deployment approach to portal development, SharePoint Portal Server 2003 has a model that fits these needs. The portal is built on a scalable, highly distributed architecture that users can deploy on a single box or server farm. Users can link Windows SharePoint Services sites, business unit portals, and the enterprise portal together at any time, enabling knowledge to be shared across an organization. What's more, through shared services, users can deploy enterprise-wide services such as search, indexing, audience management, and My Site hosting in one central place and then consume them from other portal sites.

5.2 Recommendations

We cannot deny that we are in the world of argument as people think differently from each other. As a new system is introduced to all users, there are two different groups of users who respond differently to their system administrator and system initiator. Some people with conservative ideas, may not agree to work by using the new system as they do not want to change anything that reflects their working process and they don't want to waste time for training to learn new things. These must be tough jobs of the help desk to sit with them side by side together with full set instruction manual. We must point out the benefits of the new system to his/her own functions which provide speed and more convenience in his/her working process Time will be the good factor to solve the problem of this group of user.

Another group of users, most of them are young generation which is open minded to learn new technology. Working with this group of users is not as difficult as the first group. Users can follow instruction manual by their own and sometimes without help of help desk. But one thing to consider is this group of users will try to explore anything so some restricted working area must be strictly protected in order to avoid human errors and information losts.

For the next implementation phase, system initiator should work closely with each function in detail in order to list out what are the information flows inside each function that need to share within the individual function only. System Administrator must carefully set about the access control of user, each function must specify the name list of persons who are authorized access clearly as some file or information is quite confidential and is restricted to some group of people only.

There must be information shared to the public within the near future as company information in company's Website might not enough to serve the public's need. TPT must create the visible share area that contains sufficient information which the public might need for more information or for reference.

As I am one of the members of the System Initiator Team from Corporate Planning Division, it is a tough work to serve all functions' needs in information sharing. But Microsoft Portal SharePoint can assist and serve most of users' need and also help to facilitate working process to be faster with high accuracy and safety.

System Initiator and System Administrator must work together as a team, the System Initiator is like a bridge to contact users (non-technician) with System Administrator (technician) in order to collect user's requirement and convert into system configuration form later.

Lastly, thanks to the technology that assists humans to work more conveniently and improve the quality of working process. Last but not the least, Information System will be the most efficient and effective tool when people use the right technique, in the right way.

APPENDIX A

TPT PORTAL SHAREPOINT INTERFACE
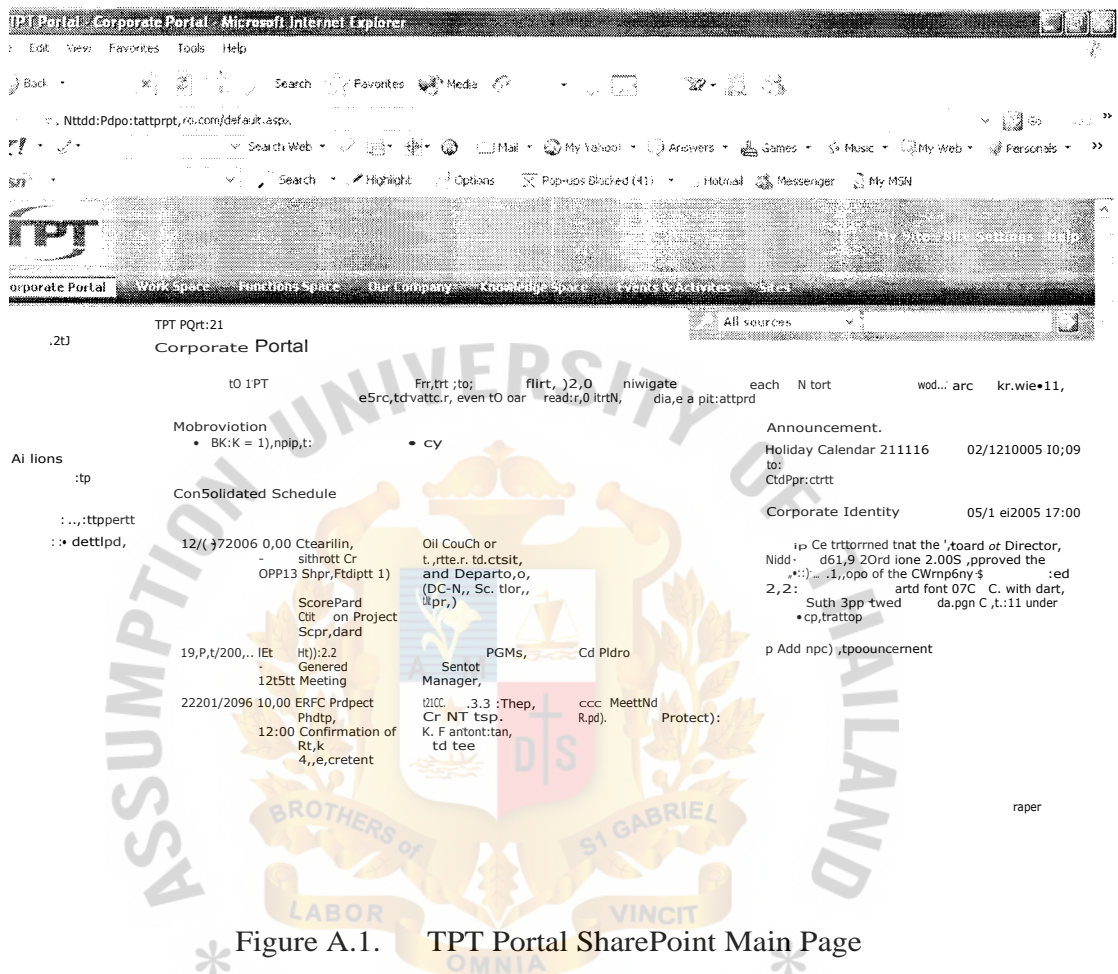
Figure A.1.   TPT Portal SharePoint Main Page
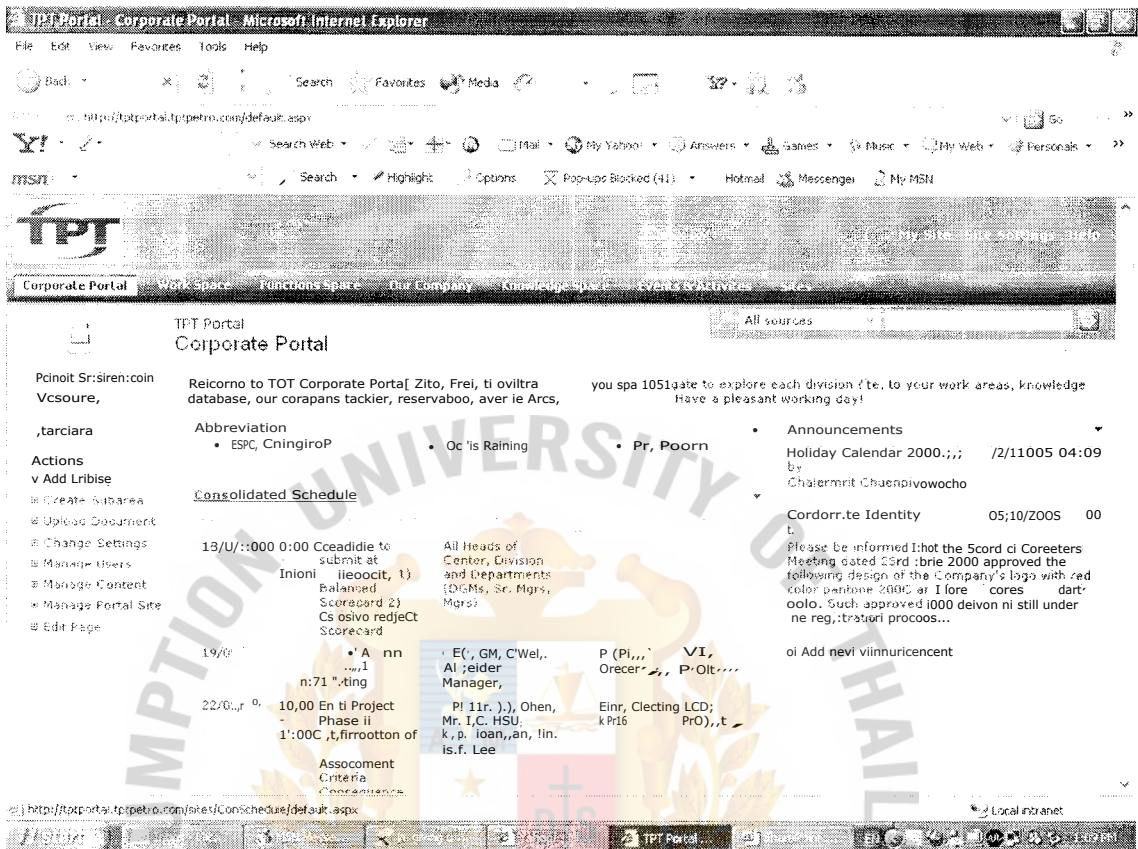
Figure A.2.   Consolidated Schedule Page

46
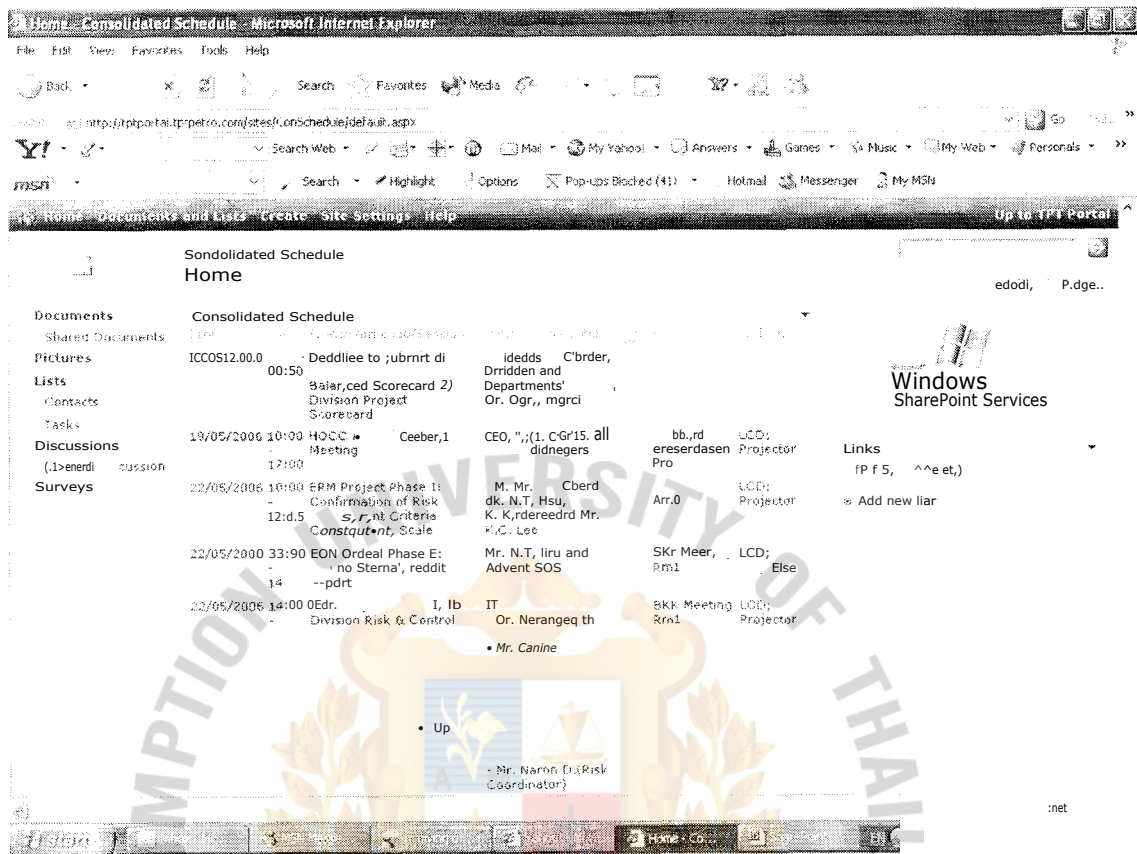
Figure A.3.   Inside Consolidated Schedule Page
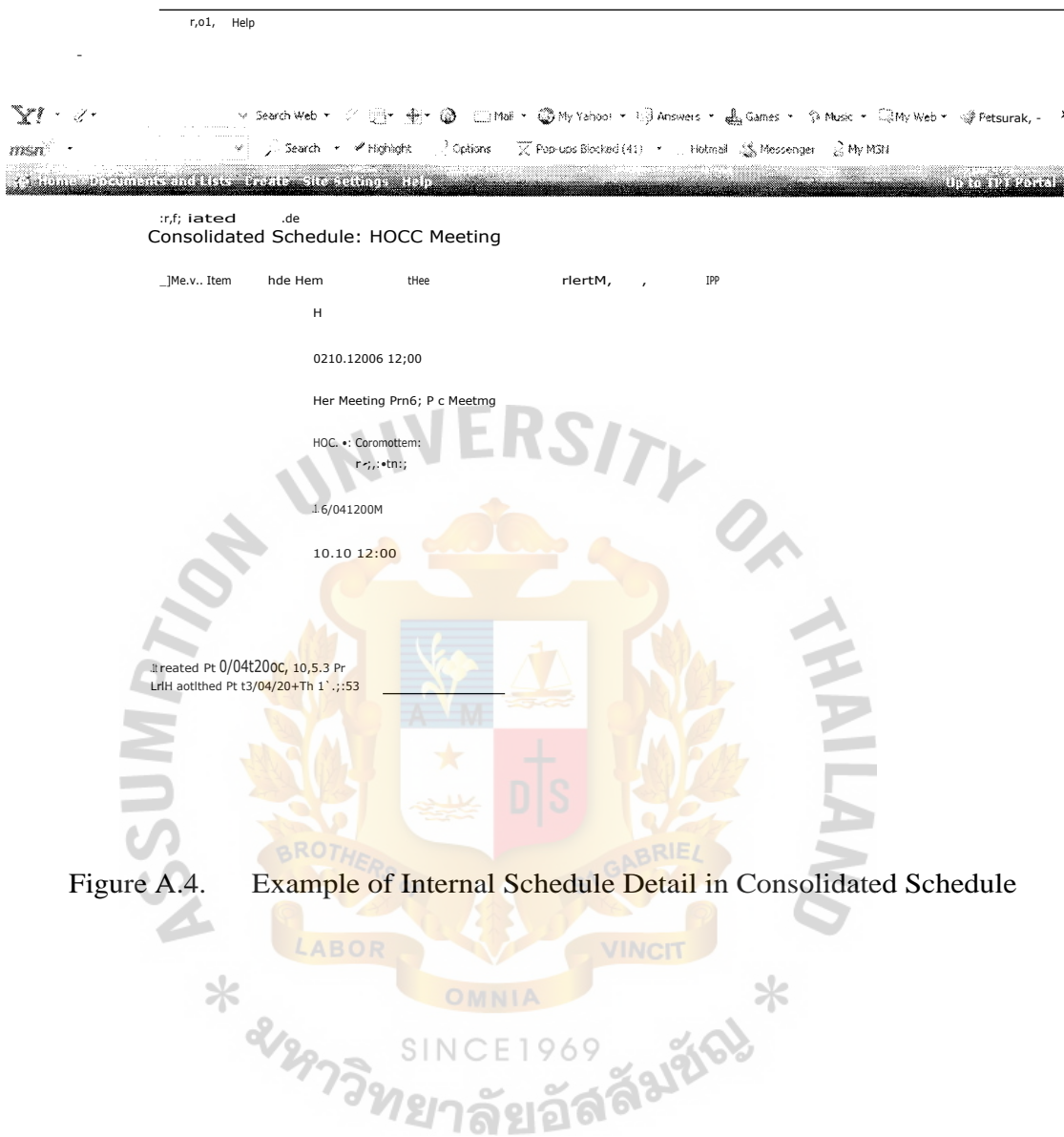
r,o1,   Help

Consolidated Schedule: HOCC Meeting

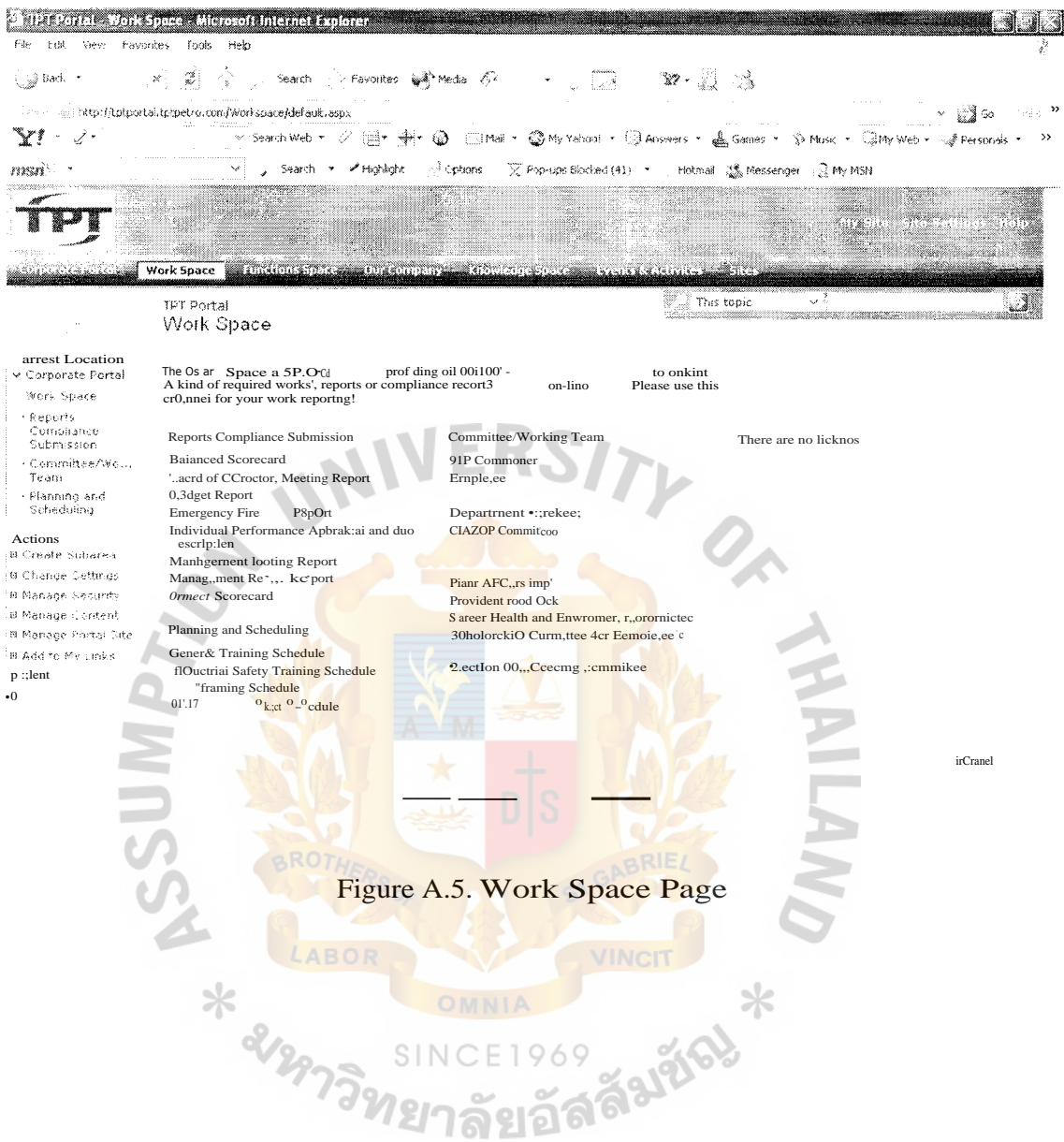Figure A.4.   Example of Internal Schedule Detail in Consolidated Schedule
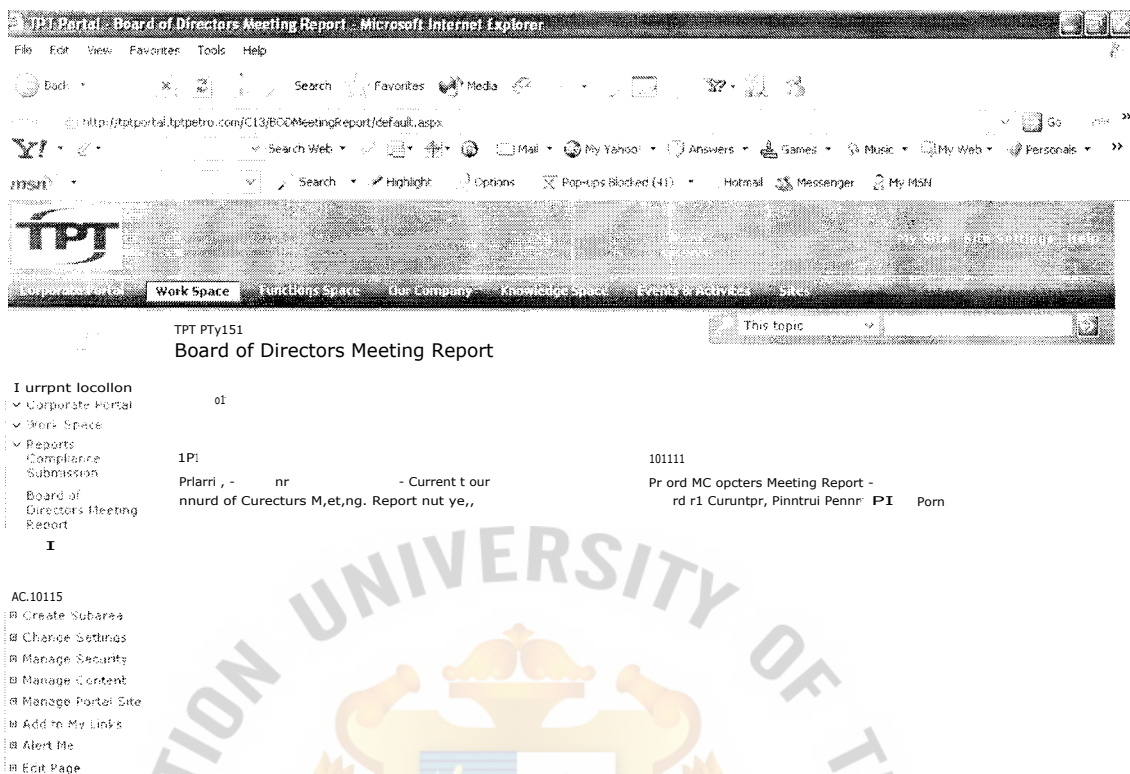
Figure A.5. Work Space Page

Corporate Portal   **Work Space**   Functions Space   Our Company   Knowledge Space   Events & Activities   Sites

TPT PTy151
Board of Directors Meeting Report

This topic

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∨ Corporate Portal   oI
∨ Work Space
∨ Reports
   Compliance   1P1   101111
   Submission
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   Directors Meeting
   Report
      I

AC.10115
⊞ Create Subarea
⊞ Change Settings
⊞ Manage Security
⊞ Manage Content
⊞ Manage Portal Site
⊞ Add to My Links
⊞ Alert Me
⊞ Edit Page

Figure A.6. Work Space Page — Board of Directors Meeting Report Page
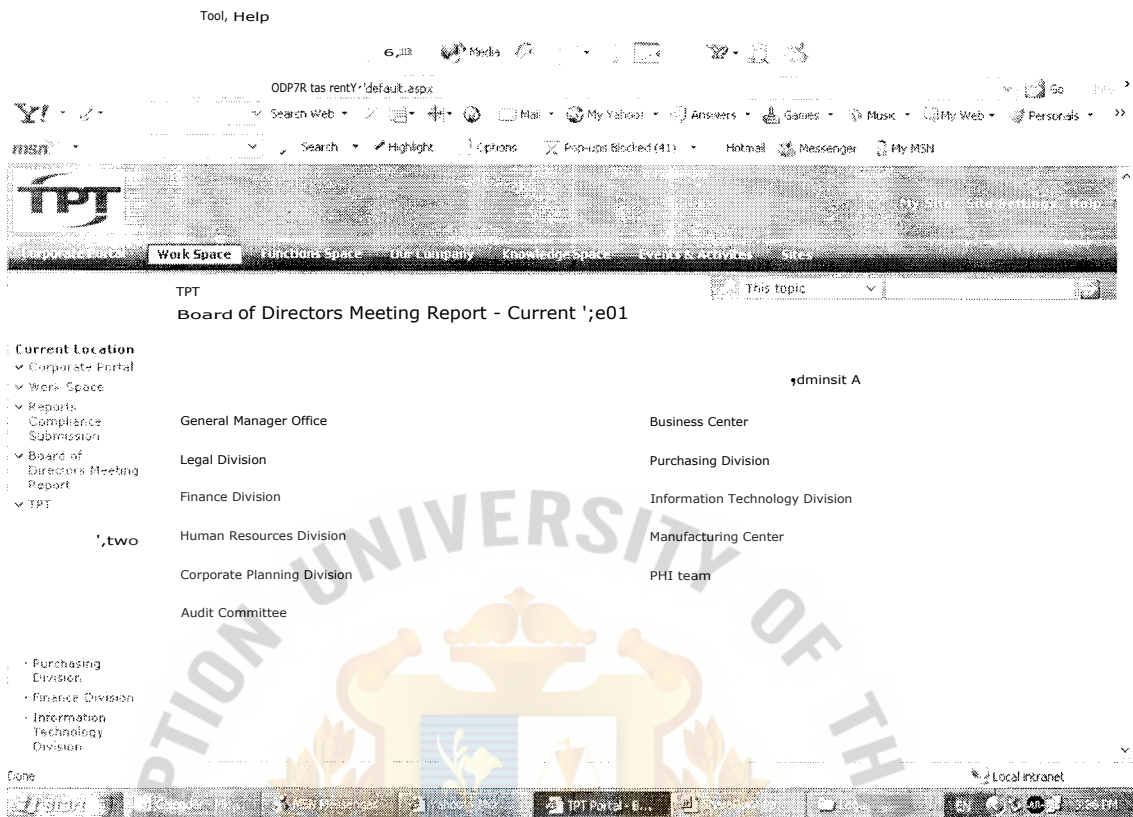
Figure A.7. Board of Directors Meeting Report Page - Current Year
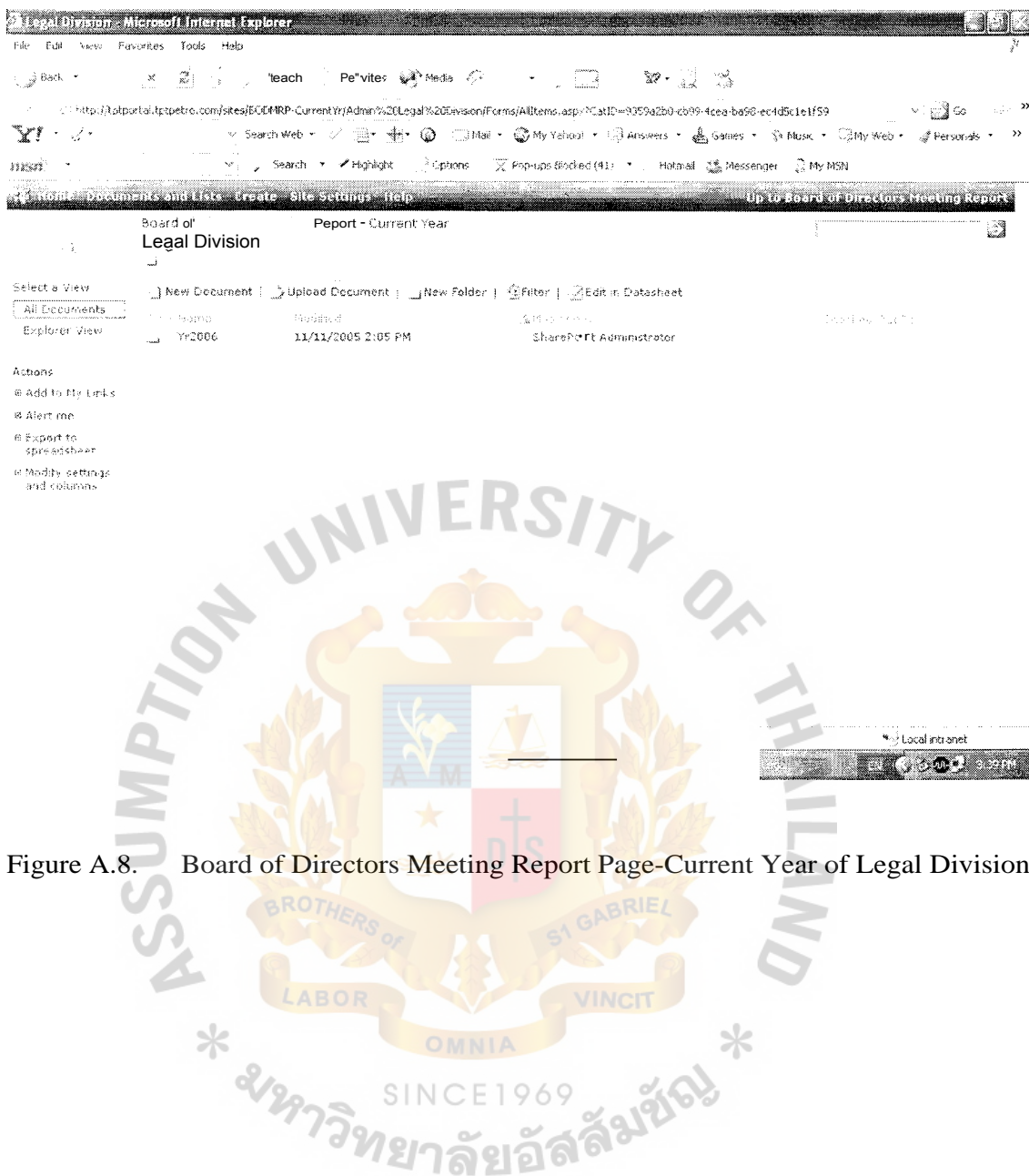
Figure A.8.   Board of Directors Meeting Report Page-Current Year of Legal Division
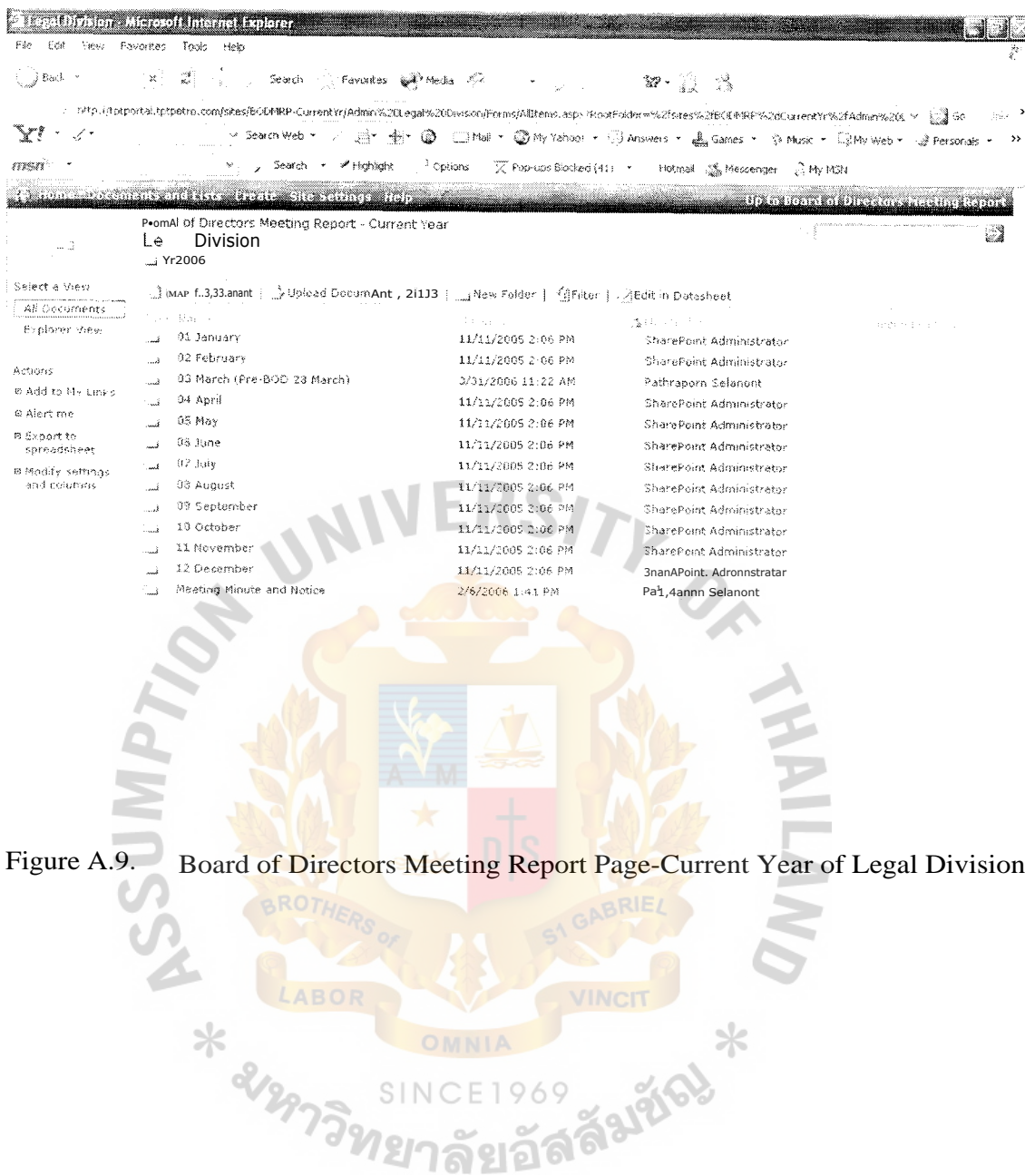
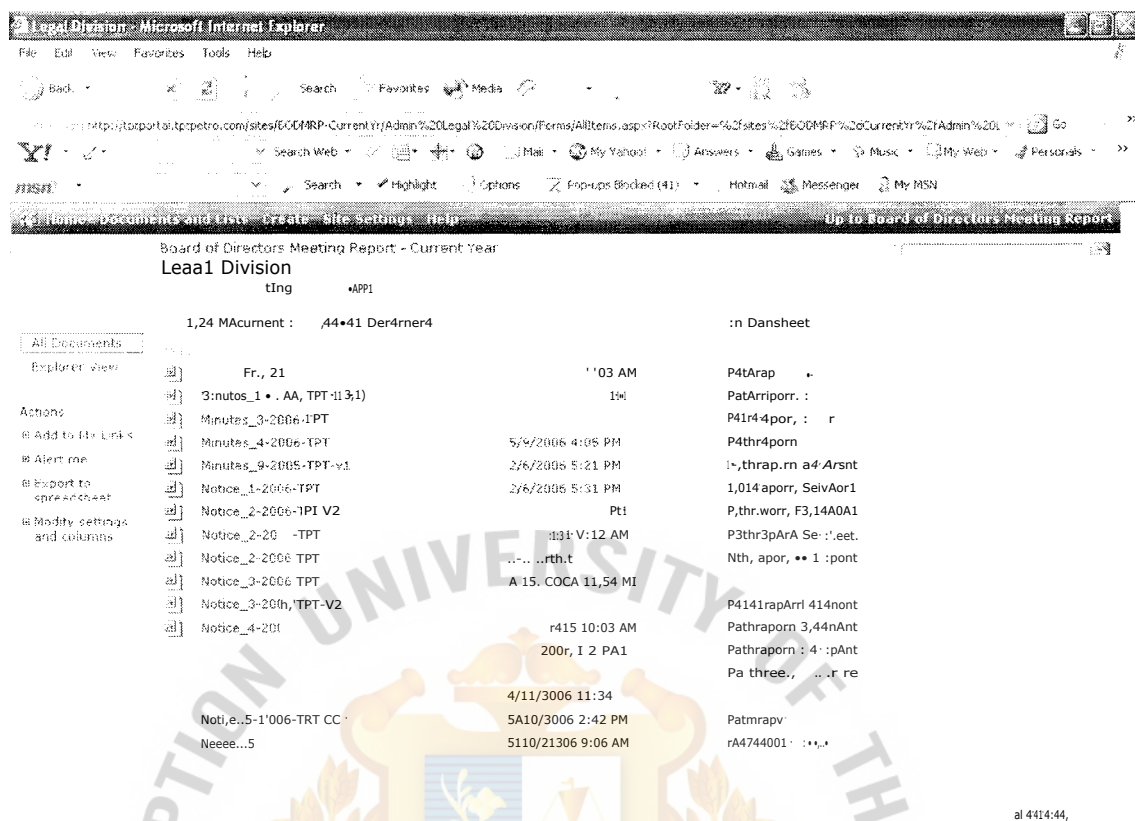Figure A.9.   Board of Directors Meeting Report Page-Current Year of Legal Division

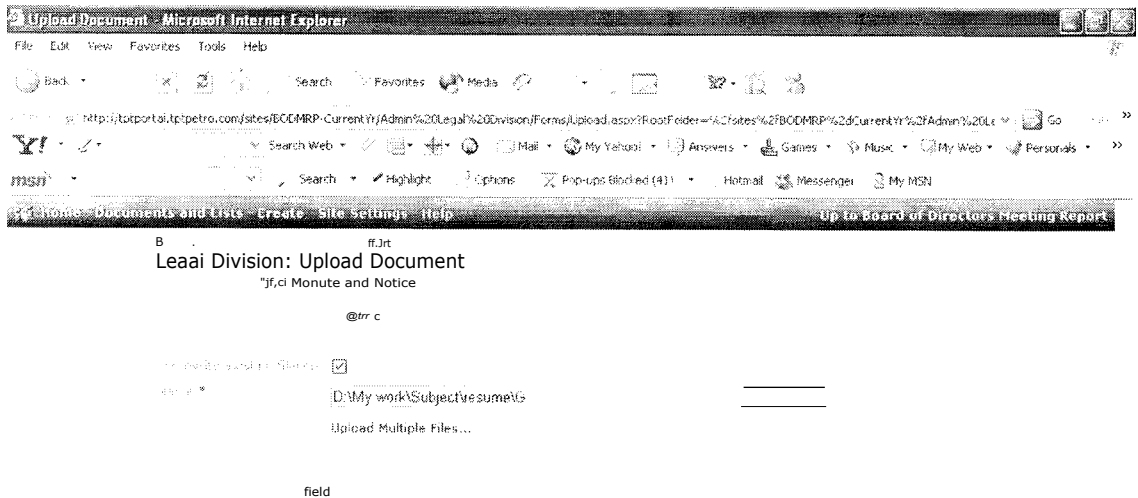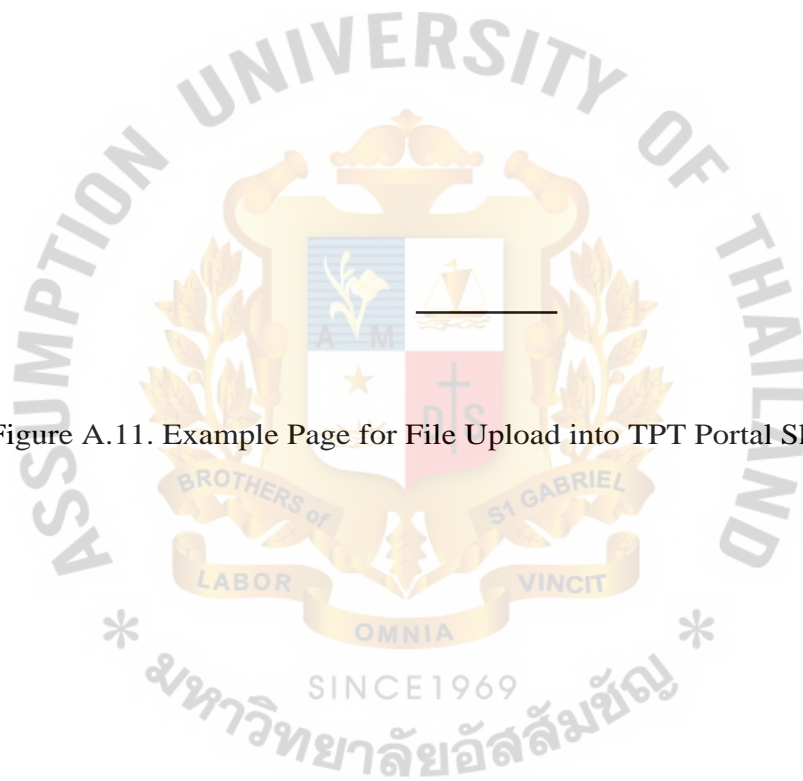Figure A.10. Board of Directors Meeting Report Page-Current Year of Legal Division

Leaai Division: Upload Document

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Upload Multiple Files...

field

Figure A.11. Example Page for File Upload into TPT Portal SharePoint
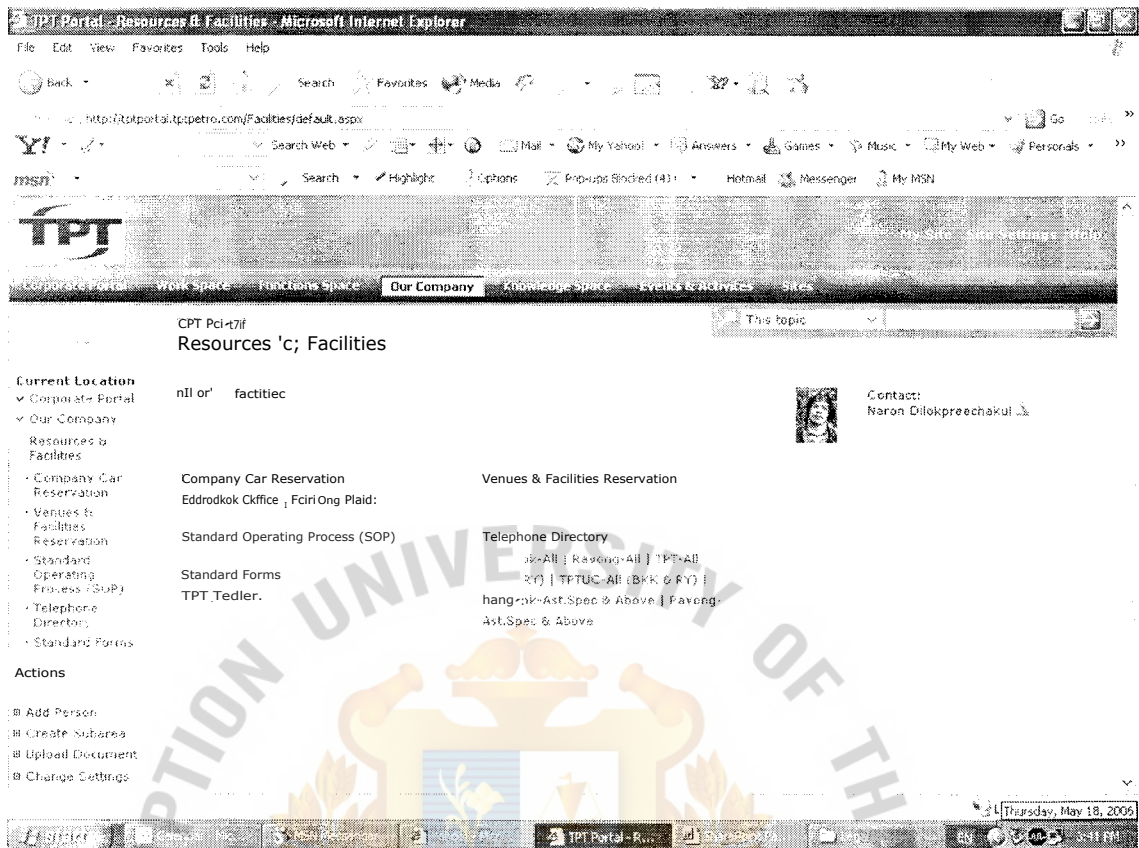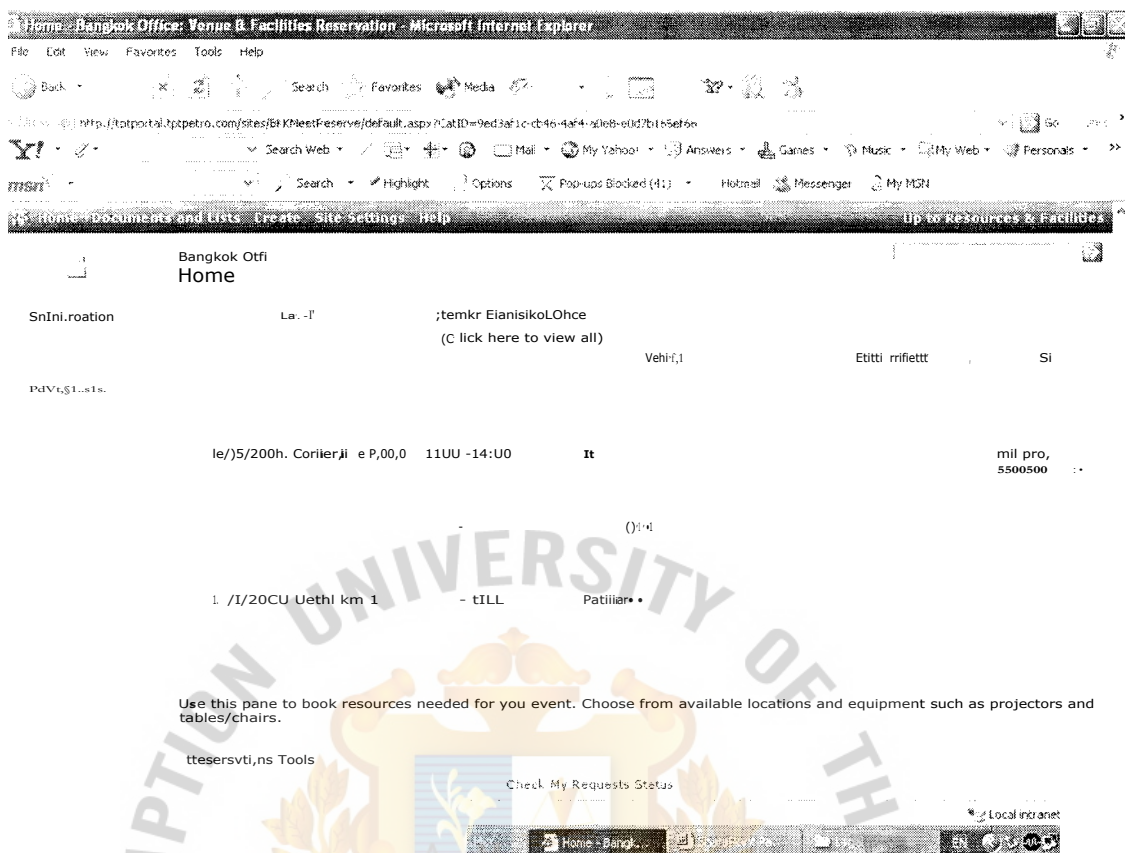
Figure A.12. Resource and Facilities Page

56

Home - Bangkok Office: Venue & Facilities Reservation - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back ·   ×   Search   Favorites   Media

http://tptportal.tptpetro.com/sites/BHKMeetReserve/default.aspx?CatID=9ed3af1c-cb46-4af4-a0e8-e0d2b165ef6e

Y! ·   ∨ Search Web ·   Mail · My Yahoo! · Answers · Games · Music · My Web · Personals · »

msn   ∨ Search · Highlight   Options   Pop-ups Blocked (41) ·   Hotmail   Messenger   My MSN

Home Documents and Lists   Create   Site Settings   Help   Up to Resources & Facilities

Bangkok Otfi
Home

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Use this pane to book resources needed for you event. Choose from available locations and equipment such as projectors and tables/chairs.

ttesersvti,ns Tools

Check My Requests Status

Local intranet

Home - Bangk...   EN

Figure A.13. Inside Resource and Facilities Page
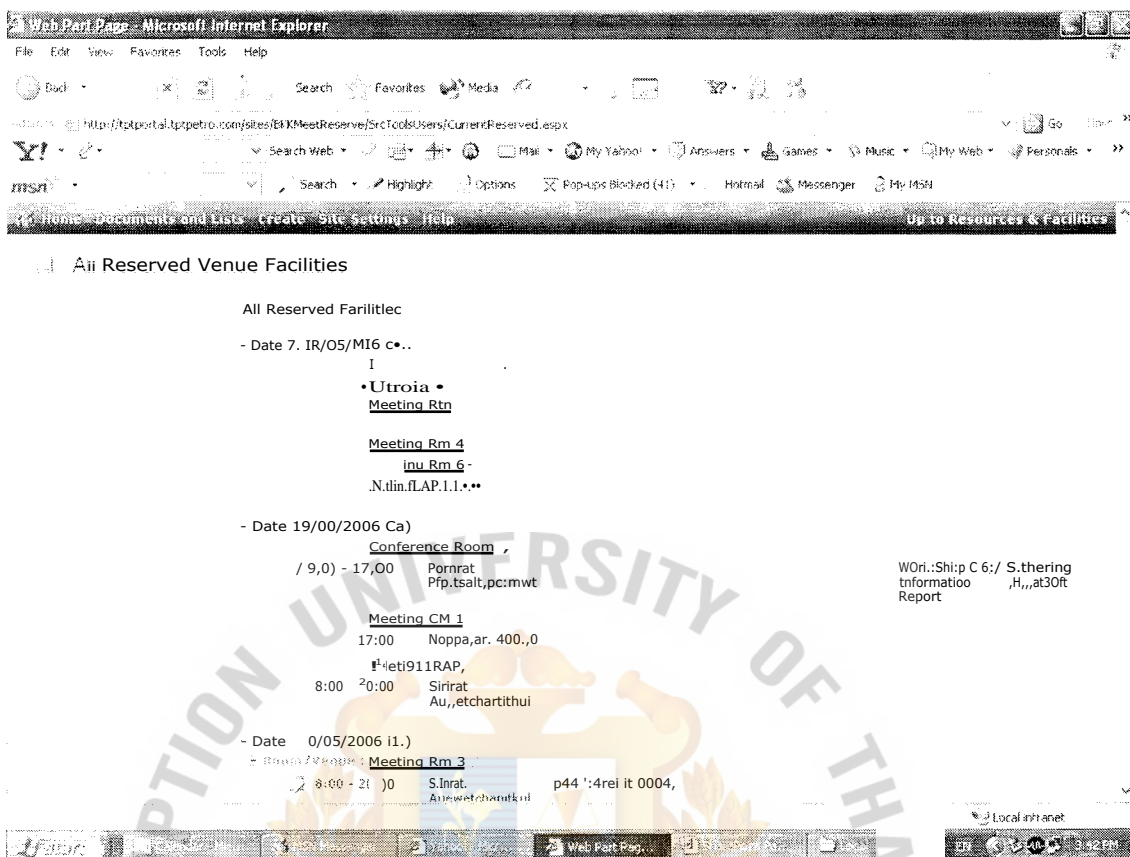
Figure A.14. All Reserved Venue Facilities Page

F.3„005 Tool, Help
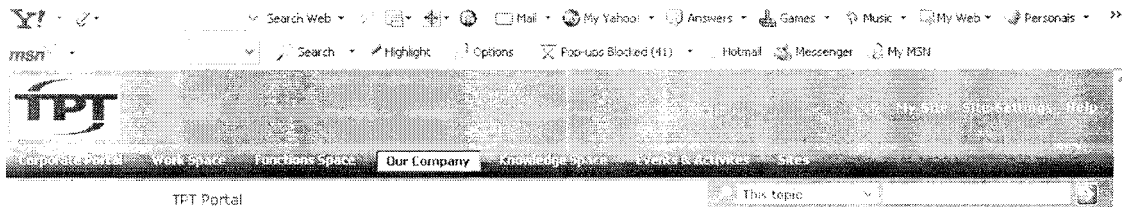
Faa too

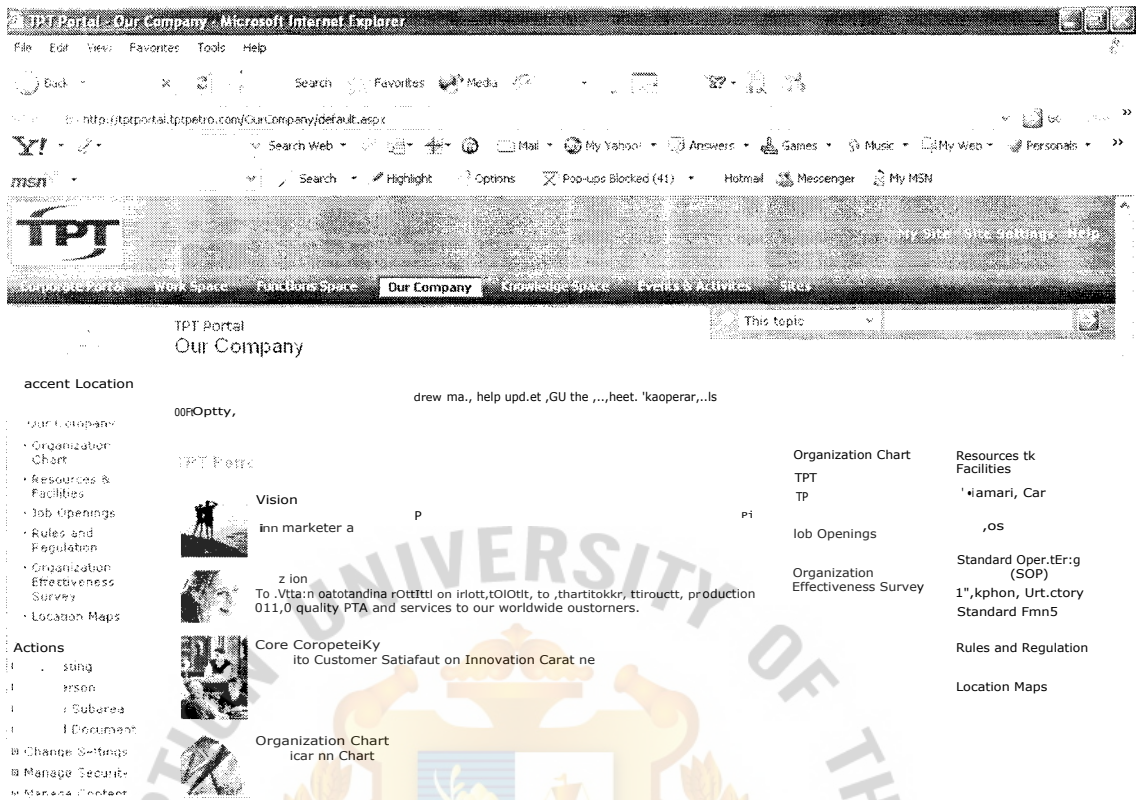Figure A.15. Standard Forms Page for Download
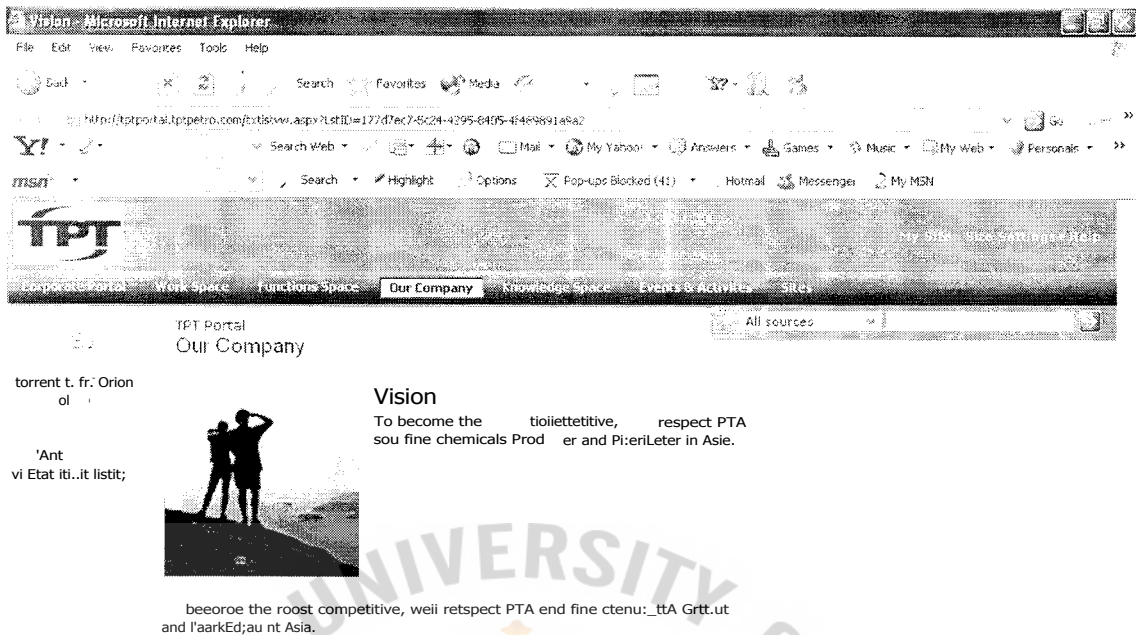
Figure A.16. Our Company Page
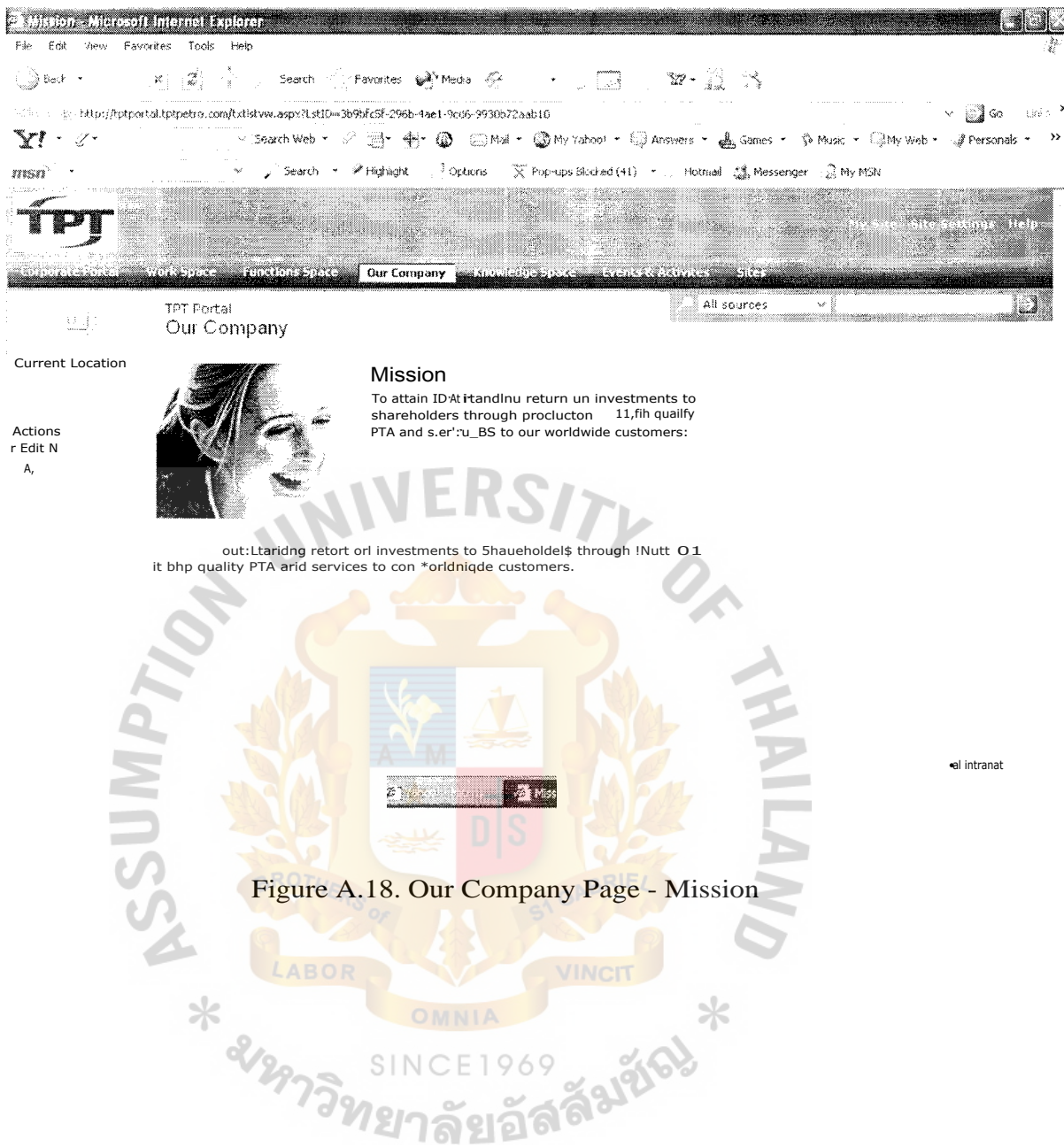
Figure A.17. Our Company Page - Vision

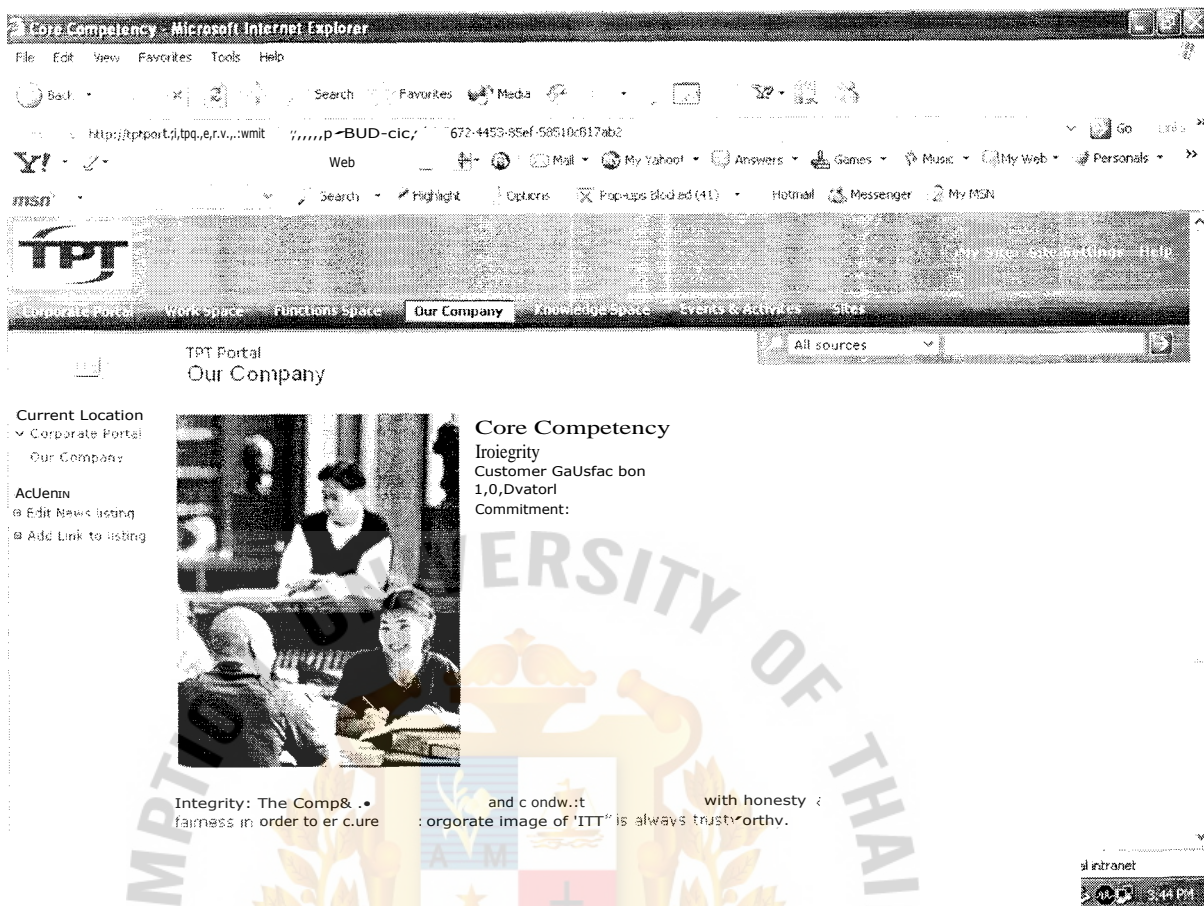Figure A.18. Our Company Page - Mission
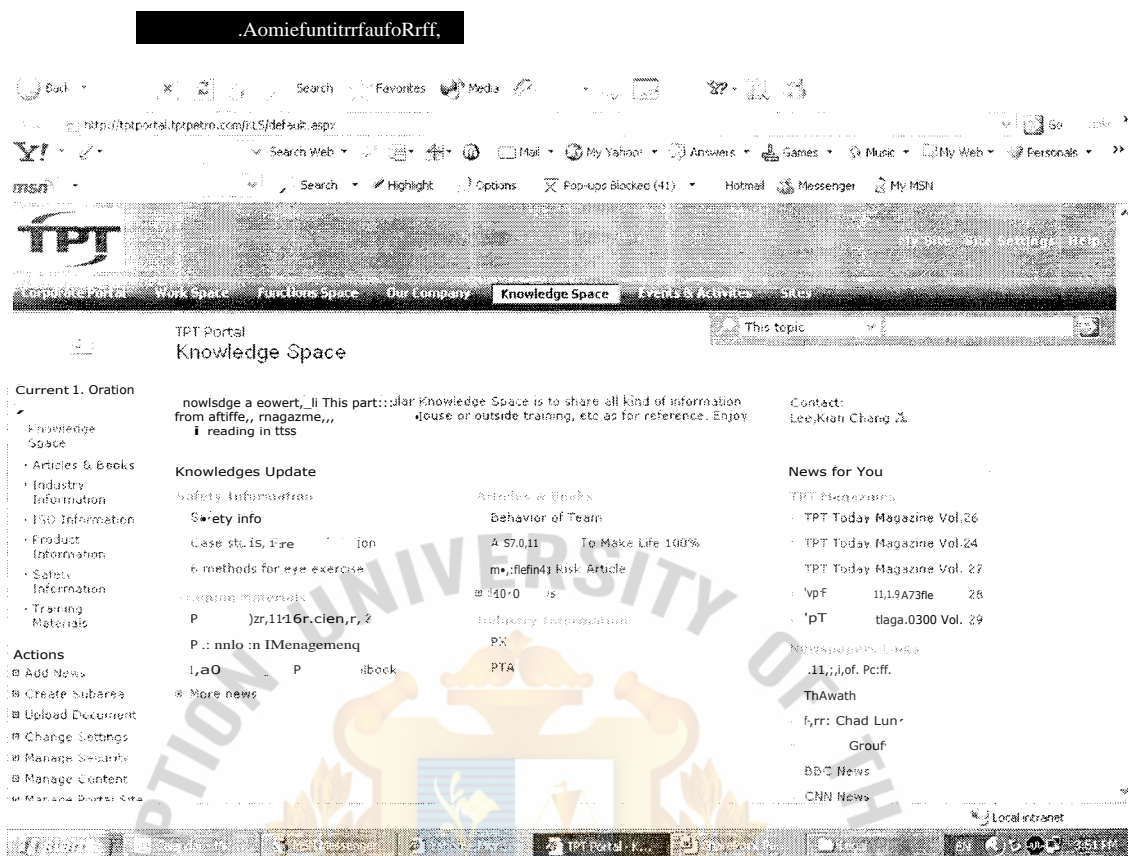
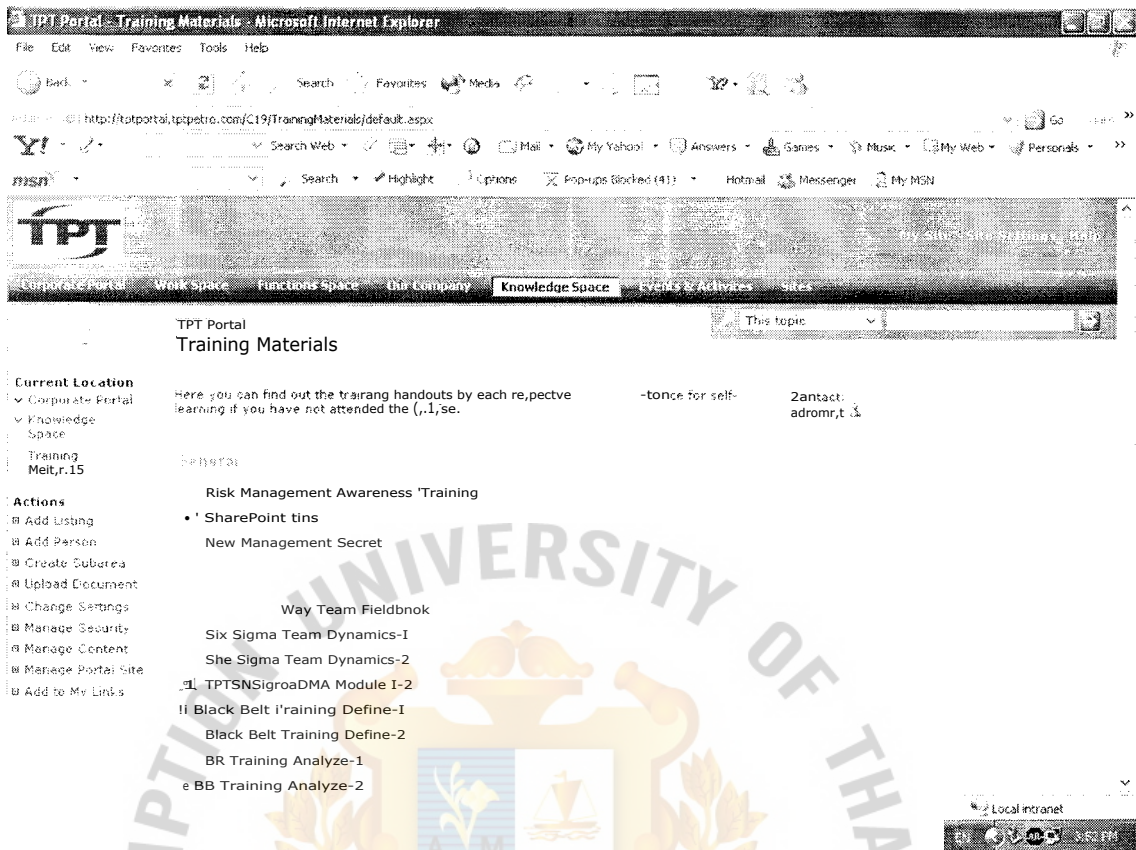Figure A.19. Our Company Page — Core Competency

Figure A.20. Knowledge Space Page

Figure A.21. Knowledge Space Page — Training Materials
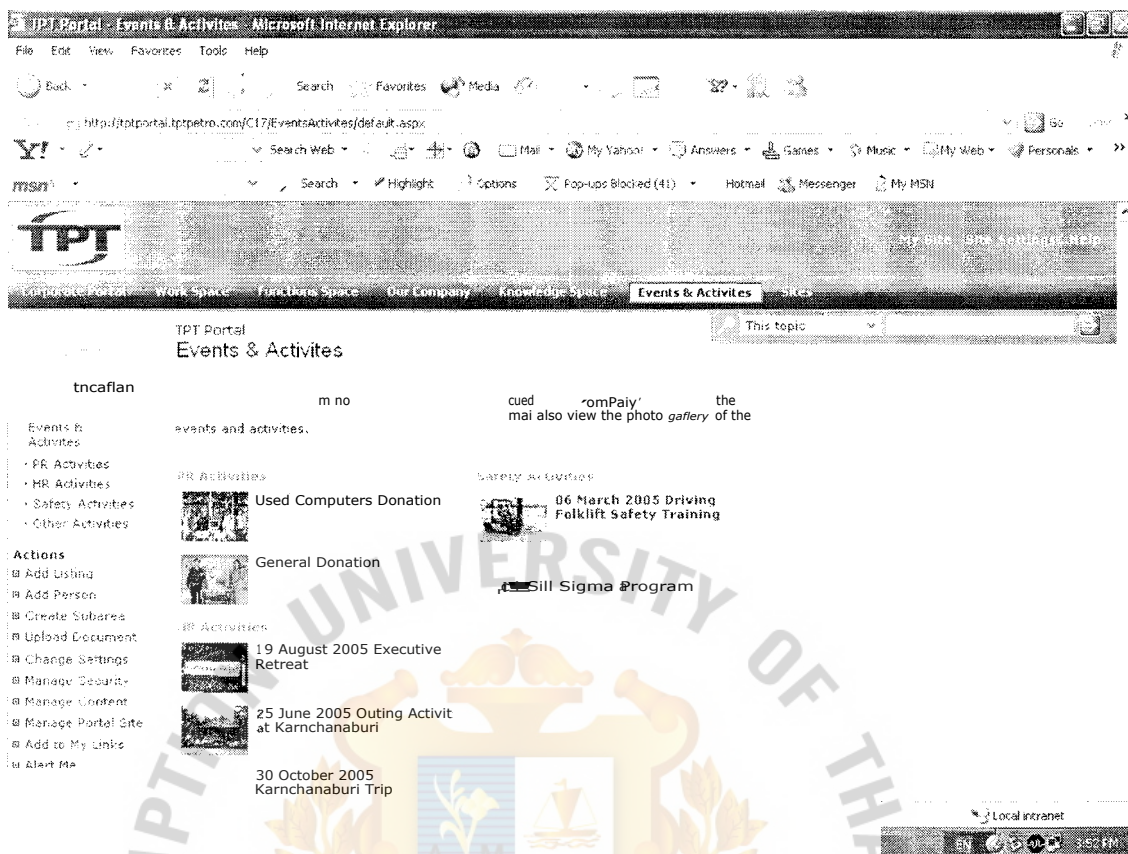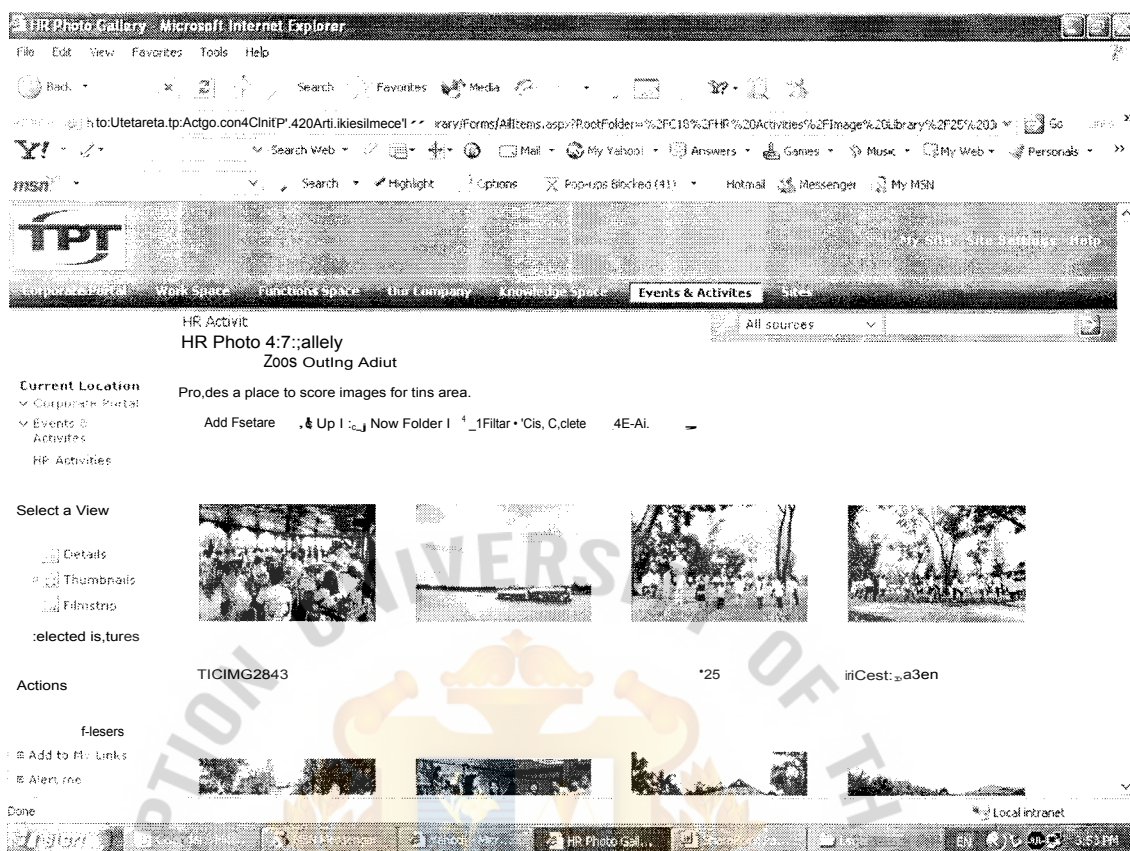
Figure A.22. Events and Activities Page

Figure A.23. Events and Activities Page — Human Resource Activities — Photo Gallery

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