# A FRAMEWORK FOR HOME STAY BUSINESS WEBSITES

by

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# ABSTRACT

The major difficulty of an online home stay business is the insufficient information provided to home stay owner. In most cases, the home stay owner utilizes this information as the way to expand the business, proving a trend of business. In addition to limited information, it can be found that the government, the home stay owner and the tourists may have difficulty communicating with each other. This, as a consequence, shows that the business is extremely influenced by information. The Blog, as a selective choice, has been implemented to enhance and promote the business. It is a cognitive channel for the home stay owner, the government and tourists to communicate, share or even exchange experiences. This thesis proposes a new framework that integrates the Blog with an educational resource, the Digital Library. The Digital Library certainly supplements and provides valuable resources and knowledge which is occasionally acquired by the owners as accessible references. And, this conveys a new way of providing home stay information while creating a new community. The system was trailed by the home stay owners and the result indicates that they satisfy the system.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| B&B | Bed and Breakfast |
| DL | Digital Library |
| FO | Formatting Object |
| FOP | Formatting Objects Processor |
| GLI | Greenstone Librarian Interface |
| GSDL | Greenstone Digital Library |
| HTML | Hypertext Markup Language |
| HTTP | HyperText Transfer Protocol |
| IT | Information Technology |
| MG | Managing Gigabytes |
| OTOP | One Tumbon One Product |
| PDF | Portable Document File |
| PHP | PHP Hypertext Preprocessor |
| RDF | Resource Description Framework |
| SME | Small and Medium Enterprises |
| TAT | Tourism Authority of Thailand |
| URL | Uniform Resource Locator |
| WWW | World Wide Web |
| XHTML | eXtensible Hypertext Markup Language |
| XML | eXtensible Markup Language |
| XSL | eXtensible Stylesheet Language |
| XSL-FO | eXtensible Stylesheet Language Formatting Object |
| XSLT | eXtensible Stylesheet Language Transformation |

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Historically, home stay business has lunched in Thailand since 1994. In general, home stay is allowing visitors or guests to stay in private homes instead of hotels or guest houses. Each home stay provides unique insights into particular destinations, communities or bodies of knowledge. It, in addition, offers special events including authentic experiences for learning and involvement with local people. It is; as a consequence, appropriate for the visitor who cares more about experiencing community-based culture rather than merely seeing landscapes.

It has been obvious that not every place is suitable to provide home stay services. Specifically, home stays are established according to their circumstance, for example, ancient remain sites, rich antique sites and area with closed to environmental natural resources. In addition to standard services, home stay, somehow, provide cultural tour, event tour and local performance shows. Last but not least, visitor can enjoy local activities, e.g. fishing, biking or local handicraft e.g. basketry, textile etc.

Home stay is simply the best choice for tourists who interested in the environmental, natural and cultural affairs. They can gain more experience from local people by interacting with them in various activities such as fishing, farming and gardening. By this, their experience will remain as a good story in their memory. Furthermore, it provides a means of independent traveling experience rather than in mass tourism. This; therefore, can be implied that home stay is another choice for tourists who have had enough of mass tourism.

> "Mass tourism or Traditional Tourism generally refers to the big conglomerates or tourist resorts in the world. Where the tourist companies are property of big transnational corporations, and where there is little interaction with the local communities". (Douglas et al., 2001)

### 1.2 Problem statement

In Thailand, there are no central and standard data sources of home stay. This, as a result, leads to lack of local information communities. Moreover, a communication barrier is the major obstacle to share and distribute the information. Finally, home stay, itself, is not able to provide the reliable information to tourist and other interested parties owning to improper information management at the end.

Home stay Thailand is launching by Ministry of Tourism and Sport cooperated with Tourism Authority of Thailand (TAT). Both organizations do not provide sufficient information and knowledge resources (books, articles, business opportunities, management requirements and regulations) for home stay owner, tourist and other local communities who are interested to own home stay business.

According to Ministry of Tourism and Sport and TAT, home stay information is accessible on the website. However, the information provided in the website make it difficult to learn and perceive the knowledge (e.g. preservation, maintenance resources and customer

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satisfaction) in order to create a local community service. According to the home stay website available in Thailand comparing with home stay member from government site, some local businesses have a potential to build their own private website to reach global market; whereas, some are not able to provide such the service. As a result, many of home stays could not eventually provide sufficient information for tourist. A small amount of ambiguous information is a cause of misunderstanding between host and visitors. (Petersen, 2001)

Furthermore, the problem that home stay owner be facing is, when they want to launch home stay business, the preliminary information acquired to run the business. In most case, they can individually gather the information by directly contacting with some home stay owners. This, therefore, is not cost effective way to collect information in this manner. (Potts and Rourke, 2000)

Finally, the major problems of the home stay business are the communication distance in sharing, obtaining information and knowledge and acquiring professional advices. In addition, many home stay owners could not provide information on the website due to lacking of IT (Information Technology) knowledge; as a result, the prospective home stay information is rarely available. In addition to all major problems, the government side can not provide enough information and sufficient knowledge to effectively support home stay business or home stay owner in Thailand.

## 1.3 Objective of study

To develop a new website framework for home stay services, using weblogs and digital libraries in order to improve the efficiency of the management and provision of home stay tourism services. Using weblogs and digital libraries with the following features;

- Providing community sharing and discussing experiences and generating new knowledge.
- Providing a central website for one community permits ease of information retrieval.
- Providing a central resource and reducing amount of time to investigate the knowledge.
- Reducing costs of communication and searching knowledge.

## 1.4 Scope of study

The study will focus on developing a website framework for home stay business by providing tools as a central of information which allows of sharing, discussing and producing a new information and knowledge. In addition, tools, as easily of changing and creating webpage, is implemented by Blog engines to facilitate different kinds of user's requirement. The framework is, moreover, integrated digital library in order to build a digital collection resource which would be valuable for local people and home stay owner.

By this approach, the work will use open source of digital library and Blog systems which provide appropriate function in the new framework.

# CHAPTER 2

## LITERATURE REVIEW

There are many websites providing home stay information in Thailand. The websites are actually managed and arranged by many organization and agents with many purposes, business, promotion and tourism information. However, there is no explicit website that provides the information as a central based, implemented with Web Blog and Digital Library. Therefore, this chapter gives a review on home stays in Thailand, Web Blog technology and digital library software, which is as follows.

### 2.1 Review home stay Websites in Thailand

**Home stay Thailand Websites**

Generally, there are three kinds of home stay websites classified by the provider agent, i.e. government, home stay owners and, home stay providers. Each of providers has different kind of information providing to the users; as a consequence, they manipulate and arrange this piece of information differently according to their accessible resource. This section presents the details of home stay website, as information provider.

### 2.1.1 Government website (http://www.homestaythailand.org. Retrieved August 10, 2005)

Home stay Thailand website is the central website of home stay, established by the Ministry of Tourism and Sport. Generally, the site typically comprises home stay history, news, member board, discussion board, rules and the manual for local community, trainer and committee. The member board is classified by region, province and the content. The content, in turn, features with home stay name, short description condensed in one paragraph and telephone number etc. However, it is noticeable that the website doses not provide any graphical information (e.g. pictures or images). In addition, the information is specifically accessible in the Thai language. With these limited of information perspective (simply insufficient information), the business is not appropriately expended and occasionally reduces the customers (the tourists) consumption. In addition to insufficient resource, another problem can be seen in government side when the informative resource is rarely provided. Therefore, the community could not be properly established in order to share and exchange some advantageous information.

Home stay fan club (http://www.homestayfanclub.com. Retrieved August 10, 2005) is another website lunched by an organization which is implicitly supported by government agent. Generally, it provides more informative content, e.g. images and pictures of some particular home stays, comparing to Thailand website. Home stay fan club, additionally, allows the users to download some articles, for example, the Thailand tourism policy, tourism marketing, home stay knowledge based, home stay management and home stay servicing etc.

### 2.1.2 Private website

This website is manipulated and arranged by the individual home stays or local hosts. Nowadays, there is a small number of private websites proving information of home stay. Some of the accessible websites, moreover, still provide insufficient information. More or less, they have language barrier problem which is normally accessible for some particular groups. The Lamai Home Stay and Guesthouse and Tour website is sample of a private

home stay. This website, actually, is member of home stay Thailand. Information provided on their website includes: (http://www.thailandhomestay.com Retrieved August 20, 2005)

- Home details and home pictures
- Location with details, simple map, transportation and timetable
- Tour and activities information
- Contact details with address, telephone number
- An online reservation submitting by email

### 2.1.3 Home stay provider website

This kind website is aimed to provide home stay information (e.g. location, food, trip and price etc.). Responsible Travel is an example of home stay provider website (http://www.responsibletravel.com. Retrieved August 25, 2005). The primary information provided in the website is as follows:

- Home stay/ Farm stay with descriptions
- Facilities provided to the visitors
- Price information
- Transportation details
- Local-environment pictures
- Online booking
- Contact information

In generally, tour agents are responsible to provide the information on the web. By this, they operate the information by establish the connection with some local home stays. Due to the fact that home stay is not rapid-expandable business; as a result, the number of home stay with contact in an agent is consequently small.

In addition, the features that are provided in the web are not able to encourage the visitors, mostly the tourists, to come and visit; lack of dynamic feature (e.g. discussion broad and content sharing)

### 2.2 Home stay/ Farm stay/ B&B in other countries

They provide home stay descriptions in details: room price, pictures, accommodations, circumstance and activities. The general information is accessible, for instance, dresses, telephone numbers and emails. The website generally provides the following features:

1. Searching features by region, quick search (word) and map search displaying the region.
2. Online booking: the feature allows the customers to check the availability of rooms on the Internet; as a result, this decreases telephone expenditure.
3. Payment feature: the feature facilitates the customer that allows them to pay by a credit card, sterling bank cheque and international transfer.

4. Currency converter link providing money exchange rate information.

5. Comment from visitor (static): this feature provides more reliable comment with static content.

6. Frequency question: This feature facilitates the users by providing some questions that are frequently asked.

7. Subscribe newsletter: the feature keep the users up to date by sending the information subscribed by e-mail.

8. Relate website link, for instance, office tourist board.

9. Travel trip links (bank holiday, telephone number, rate of exchange, weather forecast, travel map, car hire and air travel): this feature provides useful information

10. Recipes and cookbooks: it provides the description of local foods, including their recipes.

11. Brochure requirement: The brochure is consequently sent according to the request.

12. Email page to a friend: This allows users to send the pages to colleagues and friends.

13. Top destinations: this feature provides the list of top destinations. From this, it can be eased by the tourists to make a decision at which they would visit.

14. Provide region and local map: it helps and display roughly map to go to the particular home stay

As can be seen, the users can normally acquire the home stay from the website. The website accordingly has impressive to serve the information to the tourists. This, as a result, provides a means of one stop of services.

## 2.3 Home Stay Summary

Although home stay has many names, for example, farm stay, farmhouse, bed and breakfast (B&B), the standard services are generally provided. Accommodation, food, services and occasional activities are examples. In Thailand, home stay is considered as an activity that allows the visitor staying over at some local communities. In addition, the visitors are encouraged to interact and participate in the local activities organized by local people. On the contrary, farm stay provides an opportunity to visitor to stay at actual farms; as a consequence, the visitor can gain more experience working in the farms. Finally, B&B is broadly similar to hotel services; yet, it operates with specific operations.

In most cases, home stay services are successfully established in other country. The main factors to this business are the strong background knowledge and experiences of the professions. In United State, there are laws and organizations that support the home stay system. Unlike in Thailand, home stay was found in 1994 and became popular by 1998. By the time, home stay is accordingly facing some difficulties, for example, expertise-professions deficiency, communication barrier and difficult to acquire information. On the other hand, the local communities could not claim any assistance from the government side owing to none of existed low supporting to run the business. In addition, there are no explicit researches in home stay management. This; as a consequence, make difficult to acquire some cognitive reference related to this business.

In generally, setting home stay business can be preliminarily achieved by the following respects:

- Information acquired from professionals: This would provide some technical guidelines for the home stay owner who is willing to launch the business. In generally, this information is useful to the owner to make a decision on business perspective.

- Location meditation: location is considered as the major factor of setting home stay business. By this, the owner is encouraged to consider the following issues:

  o The environmental resources that, somehow, attracts to the tourists

  o Available additional resources (financial and equipments-for example)

  o The services and facilities what could be provided according to available resources

  o The prospective tourists

  o Personal skills

- Marketing issue: the owner need to take into a consideration this issue which includes market research, pricing research, pricing, promotion plane and sales.

*As a result, all above it needs a central of knowledge with communicating, collecting, sharing, reusing and creating a new knowledge between stakeholders (government, local community, local business and tourist).*

## 2.4 Blog

A **blog** (or **weblogs**) is a *website* in which items are posted and displayed with the newest at the top. Blogs often focus on a particular subject, such as food, politics, or local news. More to the point, it has emerged as a popular means of communication, affecting public opinion and mass media around the world. (http://en.wikipedia.org/wiki/Blogs. Retrieved April 11, 2006)

A blog has a unique standard-service which is different from any kind of web pages. Blog has a simple form that allows the userse to easily exlore and create some new pages. Automated templates facilitaing the users to add the article to the home page, and add the article to category-based archive is an example.
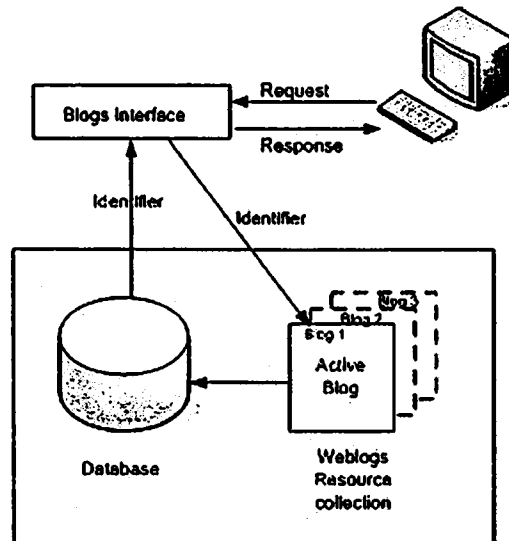
**Figure 2.1** Blog Architecture

## 2.5 b2evolution

In this framework, the rationales of implememting b2evolution blogging software can be seen as below:

- It is an open source system and easy to make installation,

- Ir is a multiple-blogs system that is suitable for home stay community to provide individual blog site for home stay owner. It can also be a central resourcce for the government to provide information and communicate with local people,

- All features support multi-blogs which are different from any ther blogging softwares; the function feature will provide only at the front page or a central page (or central blog site) and

- The system has a trackback feature, which is a good reference for any inquaries.

**b2evolution** blogging software is a multi-lingual, multi-user and multi-blogs publishing.Technically, the system is developed by PHP and MySQL database. Therefofe, it can easily be installed on almost any *LAMP* (Linux, Apache, MySQL, PHP) system.

**The drawback** of b2evolution is Posting Editor. With the posting editor, the home stay owner is required to have an implementation background, i.e. HTML, in order to modify the content. Therfore, this could be not effively exploied by some local home stay owners who novice in computer discoipline.

**b2evolution existing features** (http://b2evolution.net. Retrieved August 20, 2005)

- Multiple blogs support

- Multiple categories and sub-categories

- Reader comments & feedback
    - o Allowing readers to leave comments

- o Displaying feedback (comments and trackbacks) sorted chronologically or grouped by type

- o Displaying all feedbacks on same pages or on separate pages according to the type

- o Viewing the last comments for all posts

- Paged browsing displays (posts can be displayed by groups of 9 or whatever size decided)

- Browse by:

  - o Archives (monthly, weekly, daily or single post)

  - o Categories and sub-categories (single, multiple, recursive or complex category selection/exclusion)

  - o Calendar

- Search by words or sentence

**Back office features:** This feature is authorized for home stay owner and administrator user

- Assign multiple categories to each post

- Cross post across multiple categories and multiple blogs

- Draft status: hide posts until you want to publish them

- Private/Protected status: hide posts from non identified members

- *Trackback* and/or *pingback* on edit

- Author/User management.

### 2.5.1 b2evolution search engine

b2evolution provides search engine option which can search by both words or a sentence. b2evolution is standard HTML tags and XHTML validate posting. Then to describe metadata inside blog by embed RDF/XML in HTML/XHTML and use <link> element in the <head> element of the HTML to point at a separate RDF/XML document inside blog, shown as below.

```
<link rel="alternate" type="text/xml" title="PDF" href="<?php $Blog->disp( 'rdf_url', 'raw' ) ?>" />
<link rel="alternate" type="text/xml" title="RSS .92" href="<?php $Blog->disp( 'rss_url', 'raw' ) ?>" />
<link rel="alternate" type="text/xml" title="RSS 2.0" href="<?php $Blog->disp( 'rss2_url', 'raw' ) ?>" />
<link rel="alternate" type="application/atom+xml" title="Atom" href="<?php $Blog->disp( 'atom_url', 'raw' ) ?>" />
```

Figure 2.2 RDF/XML with HTML and XHTML

To embedded RDF/XML in HTML/XHTML is use for

- describing information about web pages, such as content, author, created and modified date

- describing content for search engine

According to its structure, Blog can be associated with metadata graphic information. RDF is a declarative language. It provides a standard way to XML in order to represent metadata in the form of statements that describes the properties and relationships of items on the web.

Metadata is machine understandable information related to web resources or other things. It is capable to describe the information precisely. Moreover, metadata is structured describing resources information. In addition the mentioned properties, metadata generally uses a controlled vocabulary and provides the context of the words- providing more scope for locating useful information with the best recall and precision.

The purpose of metadata

According National Library of Australia,

> "The key purpose of metadata is to facilitate and improve the retrieval of information. If we could target searches onto words or phrases that identify their correct role, we would also improve precision. For example, we could retrieve just those resources where "Green" is the name of the author, without retrieving resources about green peas or environmental issues. Metadata can be used to achieve this by identifying the different characteristics of the information resource: the author, subject, title, publisher and so on"

(National Library of Australia: http://www.nla.gov.au/nla/staffpaper/cathro3.html. Retrieved: April 18, 2006)

However b2evolution search engine supports only full-text search without metadata search.

## 2.6 Digital Library

Digital Library is a collection of digital objects such as text, video and audio along with methods for access, retrieval, selection, organization and maintenance. Digital libraries are for as following;

- Knowledge and content management, managing and accessing internal information assets.

- Scholarly communication, education research for e-books, data sets, e-learning.

- Access to cultural collections for cultural, heritage, historical & special collection, museums and biodiversity.

- E-governance for improved access to government policies, plans, procedures, rules and regulations.

**2.7 Greenstone Software** (v2.62) is a software suite enabling to build and distribute digital library collections. Greenstone software is to empower users, particularly in universities, libraries, and other public service institutions, to build their own digital libraries. It is an open source, multilingual software. It can install on local library or web library system. (http://www.greenstone.org/cgi-bin/library: Retrieval January 20, 2006)

Furthermore, Greenstone permits *full-text and field search*, the user can search the full text of the documents or indexes. Some collections have an index of full documents, and

index of sections, and index of titles, and index of authors, each of which can be searched for particular words or phrases. Results can be ranked by relevance or sorted by a metadata element.
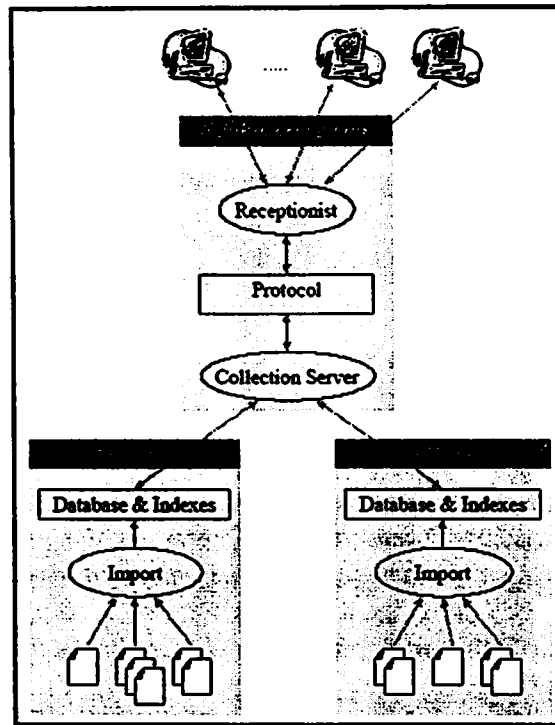


**Figure 2.3** Greenstone Architecture

## 2.7.1 Understanding the collection-building process

There are two ways of collection building process; building collection process with a remote greenstone server and run greenstone librarian interface (GLI) and launch through a command line.

### 2.7.1.1. Building collections on a remote Greenstone server

This method allows users to augment and edit collections that are held on a remote greenstone server. Users work with a modified version of the Greenstone Librarian Interface (GLI) but do not need to have greenstone running locally. Multiple users can work on the same collection but not at the same time.
(http://www.greenstone.org/cgi-bin/library. Retrieval April 05, 2006)

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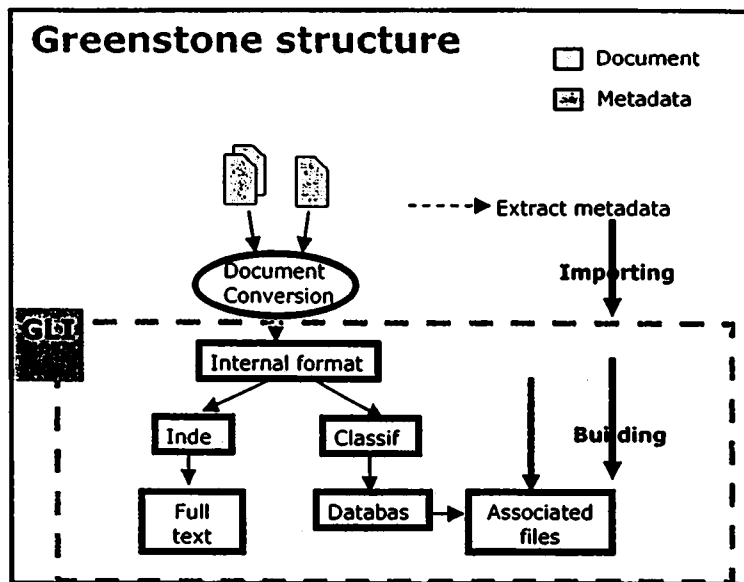**Figure 2.4** Greenstone structure

The process of building a collection

- Input: Set of document + metadata

- Import: Conversion to common internal (XML) format

- Build: Create indexes, browsing structure, metadata database

- Output: Greenstone collection

With this, the client machine needs some files in order to connect with GLI Server without any installation. Also, the greenstone server needs to set some configuration groups of user who has authorization of GLI remote control. Moreover, the user needs a background or knowledge in greenstone software.

### 2.7.1.2. Building collections from the command line

In the command line collection building process, *import.pl* is used to import the documents together with *buildcol.pl* in order to build the collection.

1. **Importing process**, this process inputs the documents into the Greenstone system by standardizing the document format (the way that metadata is specified and the file structure in which the documents are stored). The command we use is shown as below

```
perl –S import.pl <collection name>
```

The main priority is to convert documents from their native format into the Greenstone Archive Format used within Greenstone. The server needs to know what plugins should be used, and where to find the original document files. And, there are many types of document plugins exist, for example: pdf, doc, xls, html, text and etc.

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2. **Building process**. To "build" collection in order to create all the indexes and files that make the collection work, the command can be shown as below

```
perl –S buildcol.pl <collection name>
```

During the building process, the text is compressed and the full-text indexes that are specified in the collection configuration file are created.

### 2.7.1.3. Greenstone archive document format

All source documents are brought into the greenstone system by converting them to a format known as the Greenstone Archive Format. This is an extensible markup language (XML) style that marks documents into sections, and can hold metadata at the document or section level. The example is shown as below.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!DOCTYPE Archive SYSTEM "http://greenstone.org/dtd/Archive/1.0/Archive.dtd">
<Archive>
<Section>
 <Description>
  <Metadata name="gsdldoctype">indexed_doc</Metadata>
  <Metadata name="Language">en</Metadata>
  <Metadata name="Encoding">utf8</Metadata>
  <Metadata name="dc.Type">Activity</Metadata>
  <Metadata name="dc.Title">Table Width in side posting page</Metadata>
  <Metadata name="dc.Creator">lk</Metadata>
  <Metadata name="dc.Publisher">Rayong</Metadata>
  <Metadata name="dc.Contributor">home stay10</Metadata>
  <Metadata name="dc.Date">2006-03-04 21:43:24</Metadata>
  <Metadata name="GENERATOR">pdftohtml 0.36</Metadata>
  <Metadata name="Title">TITLE : Table Width in side posting page Date...</Metadata>
  <Metadata
name="URL">http://C:/Greenstone/collect/homesta1/tmp/blogsdata7.html</Metadata>
  <Metadata name="gsdlsourcefilename">import\data11\blogsdata7.pdf</Metadata>
  <Metadata name="gsdlconvertedfilename">tmp\blogsdata7.html</Metadata>
  <Metadata name="Source">blogsdata7.pdf</Metadata>
  <Metadata name="Plugin">PDFPlug</Metadata>
  <Metadata name="FileSize">1537</Metadata>
  <Metadata name="FileFormat">PDF</Metadata>
  <Metadata name="srclink">&lt;a
href=&quot;_httpcollection_/index/assoc/[archivedir]/doc.pdf&quot;&gt;</Metadata>
  <Metadata name="srcicon">_iconpdf_</Metadata>
  <Metadata name="/srclink">&lt;/a&gt;</Metadata>
  <Metadata name="NumPages">1</Metadata>
  <Metadata name="Identifier">HASH01cdb8c4202b233e8a506915</Metadata>
  <Metadata name="assocfilepath">HASH01cd.dir</Metadata>
  <Metadata name="gsdlassocfile">doc.pdf:application/pdf:</Metadata>
 </Description>
 <Content>
&lt;A name=1&gt;&lt;/a&gt;&lt;b&gt;TITLE : Table Width in side posting
page&lt;/b&gt;&lt;br&gt;

:2006-03-04 21:43:24&lt;br&gt;Author :lk&lt;br&gt;home stay Name :home
```

```
stay10&lt;br&gt;Province :Rayong&lt;br&gt;Category :Activity&lt;br&gt;Content :&lt;br&gt;
</Content>
</Section>
</Archive>
```

**Figure 2.5** Greenstone Archive Format

### 2.7.1.4. Document Metadata

Metadata is descriptive information comprising, for example, author, title, date and keyword, which are associated with a document. That metadata is normally stored with the document after it is brought into collection. Figure 2.5 shows the Dublin Core metadata standard deploying to define metadata types.

### 2.7.2 Greenstone Search Engine

Greenstone constructs full-text indexes from the document text. Indexes that enables searching on any words in the full text of the document. Indexes can be searched for particular words, all words, or phrases. In collections, descriptive data such as author, title, data, keywords etc, is associated with each document. This information called metadata. Greenstone and blog use a full-text search to improve searching.

Greenstone uses Managing Gigabytes (MG) to index and retrieve documents, and the source code is included in the GSDLHOME/packages directory. MG uses compression techniques. (Witten et al., March 2004)

# CHAPTER 3

## ANALYSIS AND DESIGN

This chapter defines fundamental concepts and technologies of blog and digital library to enhance the home stay business.

### 3.1 Requirement analysis

According to the literature review in the previous chapter, there are three groups of users accessing to home stay website: the government, home stay owners and tourists. These three groups have some similar preferences; for instance, if a user would like to search for particular information, the system should provide a search feature that can search according to a specific name or a location. Moreover, e-mail will be used as a communication channel among these groups, especially if there is any new information. Space for discussing and sharing information is also necessary for both home stay owners and tourists.

However, each of these still requires some different needs as explained below.

**Government's requirements:** The website should function as an information and knowledge central website that contains all related standard collection. For the information collection, it should be able to reuse for all home stay owners. In fact, this website should be easy to be modified, updated or even created a new one.

- Being as information and knowledge central website
- Being as information and knowledge standard collection
- Easy to create, to modify and to update information
- Easy to obtain information and reuse it for home stay owner
- Providing a space for discussing or sharing information with home stay owner and tourists
- Providing email to members (home stay owners) when have a new information
- Providing email question form
- Providing search home stay by specific name
- Providing search home stay by location
- Providing information and knowledge search

**Home stay owner's requirements:** The system should be easy to use, especially for creating, modifying, updating information, and embedding picture with contents. Member subscribes and album collection, uploaded by home stay owners and members, should be provided for tourists. Because home stay's tourists are both Thai and foreigners, the system, in addition, should offer language interpreter function, which translates from Thai to English, and it should service 24/7.

- Easy to use and understandable processes
- Easy to create, to modify and to update information
- Easy to embedded a picture within contents

- Providing discussing or sharing experience site
- Providing search information and knowledge and rapid retrieval
- Providing member subscribe for tourists
- Providing email to members
- Providing album collection that can uploading by home stay owner user and members
- Providing email question form
- Providing language interpret from Thai to English language
- Serving 24 hours a day and being accessed anywhere anytime

**Tourist's requirement:** Mainly, a tourist accesses the website in order to perceive information about a home stay; thus, the website should provide information attractively and expressively, such as brochure, top destination, language selection, and online booking. If s/he would like to recommend an interesting home stay to friends, s/he can send via an email.

- Providing sufficient and attractive home stay information
- Easy to search and facilitate user's plans
- Reducing time consuming
- Easy to give a feedback or a recommendation
- Providing email page to friend
- Online booking
- Brochure requirement
- Providing top destinations information
- Language selection

## 3.2 Proposed framework

According to the requirement analysis, blog integrates with digital library proposed to be a solution for achieve user requirements and home stay business.

*Weblogs*, a technology for community network, can be applied as personal knowledge organizers for collecting references of interesting resources and documents.

*Blog*, constructed with multiple blogs, features as a one-stop Thai home stay community. It eases for government to define information and knowledge to home stay owner, and home stay owners can share their information and discuss issues among them. Moreover, it is easier for tourists to stop only at one website where they can acquire all information that they need.

In this system, **digital library** system will be integrated with **blog**. Digital library system is responsible for obtaining and providing knowledge in digital collection, and it also contains blog archive contents and digital resources, which are valuable for local people and home stay owners to enhance their business. Furthermore, the system provides a new

search feature, inside blog, that retrieves and present the result from both blog and digital library systems. The proposed framework picture is shown at Figure 3.1
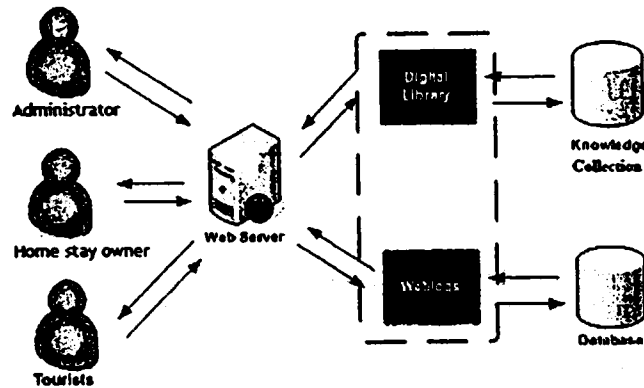


**Figure 3.1** Proposed Framework

From the framework, weblogs technology is designed for home stay owner to establish their webpage and their business information. Then, they can share their information among themselves, other local hosts and tourists via this blog. All users can obtain home stay information by accessing and requesting information from weblogs through the web server. The web server will retrieve weblogs information from the database and return it to the end user. In other parts, the weblogs integrates with the digital library in order to provide digital collection that contains archive contents and knowledge resources, such as English conversation book, housekeeping book, environment conservation and other digital resources. These digital resources, such as reference knowledge, are valuable and helpful for running and managing a home stay business.

### 3.2.1 Framework Components Overview

As presented in figure 3.1, five main components are embedded in this framework.

- **Web Server** is responsible for connecting all components working together, such as delivering a web page to a user's browser, or a file to an application. This connection works perfectly via the HTTP protocol.

- **Weblogs**, a web community, contains both government blog and all Thai home stay blogs, which responds to information requests.

- **Digital Library**, a digital resource collector, provides home stay digital library collection, and it also responds to information requests.

- **Database** stores blog data contents and all other information containing in a blog

- **Knowledge Collection** stores knowledge resources and blog archive content.

> "**Knowledge** is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms." (Davenport and Prusak, 1998)

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### 3.2.2 Group of User

Three groups of users presents in this system framework.

1.  **Administrator**: A governmental officer who has a full authorization of configuring blog and digital library system. S/he should not be a novice of using a computer because s/he is the one who works with all configurations and provides a weblog for each home stay owner.

2.  **Home stay owner or blog users**: These groups have full authorization on their own blogs. In fact, they can create, modify and update contents, or even set user permissions for their members.

3.  **Tourists**: They use this webblog community in order to find home stay information. Moreover, they can give comments to any content in order to share and discuss experiences with other users. However, they do not allow creating their own topic or content in the blog.

### 3.2.3 Framework conceptual design for user workflow

All proposed features, except searching feature, are working at the back end. It means if the user would like to use it, they need to login to the system or they must have authorization to access to the back end system. Two groups of user that can this are an administrator and a home stay owner.

**Administrator user**

1.  Administrator user provides a weblog to new home stay members and creates a new account for them, so they can access to the administration part or the back end of the system. These members can be a home stay owner or others who are concerning about this or requested by home stay owner. Thus, one blog can have more than one user.

2.  After creating a new blog and a new user, the administrator needs to give user an authorization of accessing the blog. Thus, the user has a full authorization that allows him/her to use all system features.

**Home stay owner user**

3.  After the administrator arranges the weblogs and set the user authorization, the new home stay owner can have own blog and be able to access to back end by using the username gotten from the previous step.

4.  Before starting posting content, the home stay owner should create a category inside their blog. If not, the content can not be published on blog because each content must belongs to at least a category. However, one content can be posted into more than one category.

5.  The home stay owner can use any features inside their blog. The features are explained below.

    *   Creating categories, which they can create unlimited categories inside their blog

    *   Creating, editing, posting, and retrieving contents

    *   Defining blog information, such as home stay address and home stay description, and user permissions

- Viewing a user profile, such as user information and password

- Uploading contents and digital knowledge to GSDL

- Filling in and modifying guest history, such as expense and costs

- Viewing incomes

**Tourists user**

6. The tourists usually use the system in order to search the home stay information. Normally, they utilize the system when they need to find some home stay websites or a relevant piece of information. With the interactive features, typically, are offered some options to do a particular search. For example, if one needs the information of home stays which are located in Ayuthaya, he/she might have 2 selective ways to do a search- as follows:

- He/she can browse to the list of home stay visualized as a tress directory. As a result, they would be able to directly perceive all information provided by home stay owner via the link on the items, or

- He/she is able to search the information using a search feature provided by the system. The system allows the users to do a particular search using a keyword. For example, the user might input the word "Ayuthaya" to the system to get the results of any contents which contain the word Ayuthaya.

Additionally, even though a tourist can leave a comment on any content that permits comment, they can not create their own content

### 3.2.4 Framework Features Overview

According to the proposed framework, integrating blog and digital library system together, there are three main features, which consist of uploading blog archive contents to collection feature, uploading digital knowledge resources to collection feature, and providing a new searching with retrieve the results from both systems.

However, this framework can be enhanced with additional features, such as home stay directory tree for browsing home stay location, new posting editor for enhancing posting content, and financial supporting for collecting financial information.

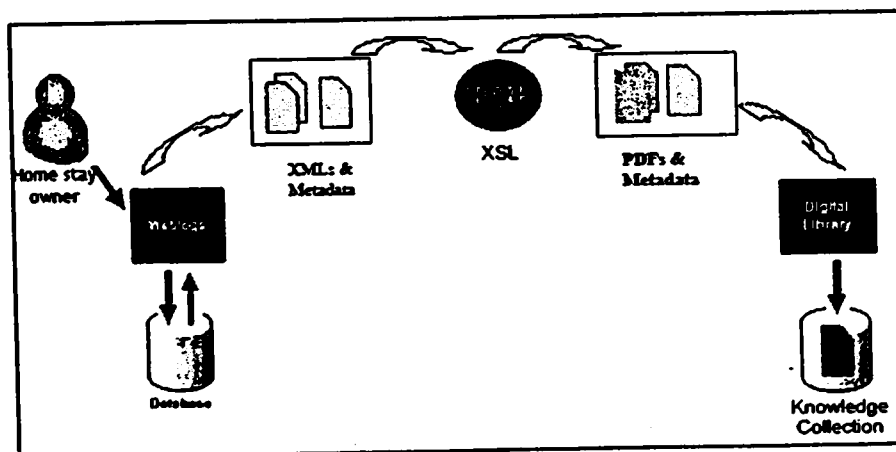### 3.2.4.1. Uploading blog archive contents to collection feature



**Figure 3.2** Uploading Blog Archive Content Workflow

This figure presents a workflow of uploading blog archive content to a digital library collection. A home stay owner requests a blog archive content, then the system accepts the request and searches the data in the database before returning the result back to the user. In fact, the result comes from automatically transforming from blog contents to set of XML files that assign metadata. Next, FOP receives the set of XML files and transforms them to PDF files. Within this process, FOP needs XSL file to transform from XML format to PDF format. After that the home stay owner connects to GSDL and brings the files into appropriate collections via importing and building features of the system. Indeed, this collection collects blog archive contents in the greenstone archive format with included metadata. In addition, because these have been made online, they can be search and browse to end users.

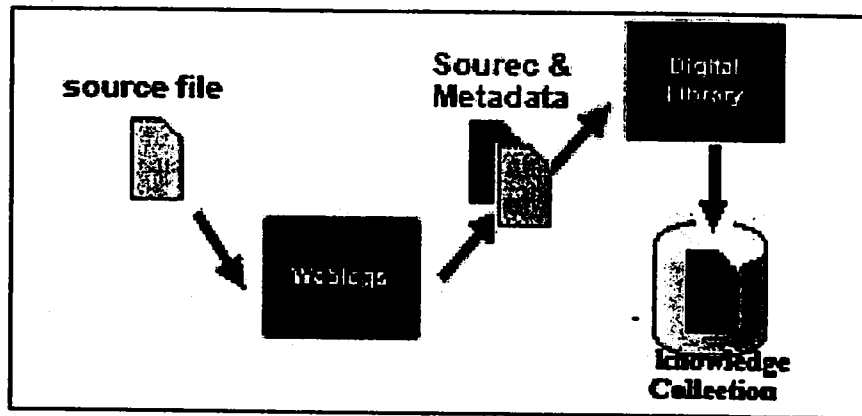### 3.2.4.2 Uploading knowledge resources to collection feature



**Figure 3.3** Uploading Digital Knowledge Resource Workflow

The above figure shows a workflow of uploading digital knowledge resource to a collection. This feature is mainly for an administrator and a home stay owner. A home stay owner would like to upload a resource and to assign metadata to that resource. The system receives the resource file and automatically generates a metadata file. Then, the home stay owner user requests to connect to GSDL system that runs the importing and building processes in order to bring the digital resource to collection. Nevertheless, the administrator also can upload the resource directly to the collection by using greenstone librarian interface (GLI).

### 3.2.4.3 Searching Workflow

In order to search for particular information, there are a few steps. First, a user enters a keyword into a search form of a blog system. Then, the system sends this keyword to both search engine of the blog and search engine of the digital library before querying and returning the result. This result will display into both blog's window and GSDL's window. Finally, the user receives the result via the web browser.

However, the blog has two different searching features providing in multiple blogs. In central blog, it provides a search that retrieves information or content from all blogs of the community. On the other hand, the individual blog provides a search that retrieves information or content from an active blog. In other words, searching with a keyword works only inside their blog.

Thus, a new searching feature in the individual blog is proposed. It can search by a keyword and retrieve information or content from all blogs as same as with searching feature that providing in a central blog. In fact, it is more useful than only getting information from their blog. Moreover, users can learn and get more information from other blogs, which has similar interesting issues.

## 3.3 Framework Solution

This proposed framework should solve home stay business problems and improve this business as presenting below.

- Being as a community of home stay business websites.

- Serving blogs as website for local home stay businesses.

- Providing as central website of information and knowledge for home stay business.

- Solving communication distance in sharing, obtaining information and finding professional advice in this area.

- Integrating digital library in the system, which is responsible for acquiring and providing a knowledge collection.

- Providing the searching feature with easy to find information reference and knowledge resources. This is valuable for local people and other parties.

# CHAPTER 4

## IMPLEMENTATION AND EVALUATION

The prototype framework is implemented to illustrate feasibility of blog integrated with a digital library. The framework is implemented from b2evolution blogging system and greenstone for digital library software.

In order to implement a blog system, there are a few points that a developer should consider. First, the developer should understand the database of blog system, especially relationships between tables. Next, if any fields or functions need to be adjusted, they should be modified regarding to the programming structure. Finally, fields and tables can be added in the database if it is necessary.

### 4.1 Framework Features Detail

Home stay information can be divided into two types: public and private. Public information refers to information that is distributed to the community and is shared with others. On the other hand, private information or individual information is information that is not shared in the community. In fact, only home stay owners or the administrator of the home stay can access this private information.

In the framework of this project, six new features are implemented.

- Home Stay Directory Tree Feature

- Posting Editor Feature

- Uploading Digital Resource to Collection Feature

- Uploading Blog Archive Contents to Collection Feature

- Financial Supporting Feature

- Searching Feature

### 4.1.1 Home Stay Directory Tree Feature

Home stay directory tree feature is a home stay list, which presents with a linkage and is classified by location. This linkage is similar to directory connecting presentation of the Window Explorer. This feature will help users to find a home stay website and information inside it more convenient. Creating home stay directory tree, done by an administrator, starts from the beginning of filling home stay information in a form of setting a new weblogs. To succeed this, modifying registration form and b2evolution database is required.

### 4.1.2 Posting Editor Feature

As mentioned in chapter 2 about the drawback of existing editor, the drawback can be improved by integrated the FCKeditor software into the blog system. FCKeditor software is an open source, which eases of installation and configuration. Moreover, it provides WYSIWYG feature, so what you see in posting editor is what you will get on the web browser. This could improve the quality of webpage layout and easy posting content.

### 4.1.3 Uploading Digital Knowledge Resource to Collection Feature

This feature is designed for uploading any digital resources to home stay collection in GSDL, which is provided by an administrator and a home stay owner. If they have any digital resources and it is useful for them to share with other local people, they can upload to home stay collection via the blog system without installing GSDL software on their local machine. In addition, this process is very easy even though non-technical user, who has no experience or knowledge about the GSDL system, is still able to use it. However, before uploading any resources, they need to assign metadata for each of them. Defining metadata is for searching indexes feature inside GSDL to find information in collection. Although metadata is not assigned in the resource, the resource still can be build into the collection. Without assigned metadata, the resource can not be published in any classifier inside the GSDL configuration. It can, however, be retrieved by searching for particular words or full text search. The detail of uploading processes is explained below in the section of "Building a Resource in home stay Digital Library Collection".

### 4.1.4 Uploading Blog Archive Content to Collection Feature

This feature is designed for retrieving blog archive content posted by users, such as a user opinion. This is very useful for referencing and also for the future. This feature consists of four main functions;

1. Retrieve blog archive contents in a set of XML files with one Metadata.xml file

2. Transform XML to PDF files by using FOP, in this function needs

   - XML file (blog archive content)

   - XSL file

   - FOP program

3. Uploading all resources to GSDLHOME/import/data? directory to GSDL system.

4. Build the resources to home stay collection inside GSDL

### 4.1.4.1 Retrieve blog archive contents function

About retrieving blog archive, first, the system receives it from database and transforms it to XML document format. Next, the system will automate generating *Metadata.xml* file to assign a metadata for each document. The example is presented as Figures 4.1, 4.2 and 4.3

**Figure 4.1** Blog Content Retrieval Structure
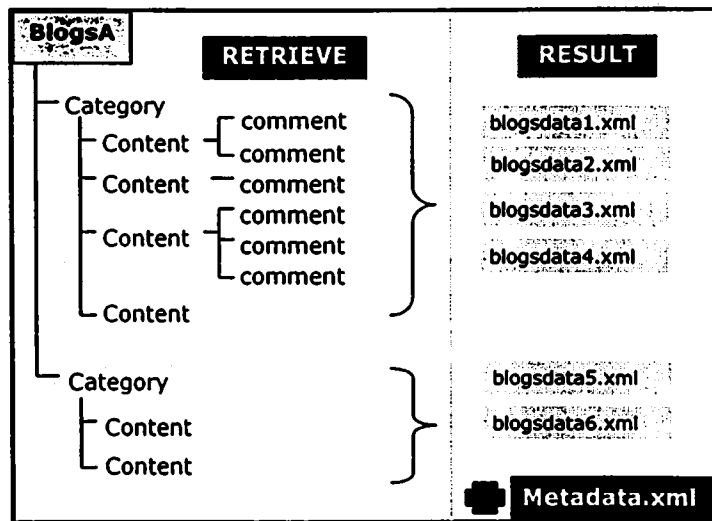
```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE xsl:stylesheet [<!ENTITY nbsp "&#x00A0;">
<!-- NO-BREAK SPACE --> <!ENTITY middot "&#x00B7;">  ]>
<data>
<posting>
<title>After i take out many button</title>
<date>2006-03-04 21:35:25</date>
<author>lk</author>
<blogname>Homestayl0</blogname>
<province>Rayong</province>
<category>Activity</category>
<content><p>i delete many button function form this page ..
hope do not have any effect with posting,, Please !</p>
<p>
<table height="297" cellspacing="1" cellpadding="1" width="400" summary="" border="1">
    <tbody>
        <tr>
            <td valign="top">
            <p>Nice to see both of you :)</p>
            <p><img alt="" src="K:\misc\pics\Su.gif" /></p>
            </td>
            <td><span class="Title">
            <p> </p>
            </span></td>
        </tr>
        <tr>
            <td>How can i expand this feature ... HELP HELP </td>
            <td> </td>
        </tr>
    </tbody>
</table>
</p></content>
</posting>
</data>
```

**Figure 4.2** Blog Archive Content Retrieval (blogsdata.xml)

```
<Metadata mode="accumulate" name="dc.Title">After i take out many button</Metadata>
<Metadata mode="accumulate" name="dc.Creator">lk</Metadata>
<Metadata mode="accumulate" name="dc.Date">2006-03-04 21:35:25</Metadata>
<Metadata mode="accumulate" name="dc.Type">Activity</Metadata>
<Metadata mode="accumulate" name="dc.Contributor">Homestayl0</Metadata>
<Metadata mode="accumulate" name="dc.Publisher">Rayong</Metadata>
```

**Figure 4.3** Metadata.xml

## 4.1.4.2 Transform XML to PDF by using FOP

Transforming from blog archive contents to a PDF file is essential because of few reasons.

- First, a HTML file has a difficulty with images because these images can not preview on a web browser after built in Greenstone.

- Last, PDF files are more secure than HTML files because they can not be modified by any home stay owner or users.

**Formatting Objects Processor (FOP)** is an open source java processor, which is able to convert XML document into PDF. For example, if we have our blog content in XML format or stylesheet information in the form of an XSL files, FOP will convert this data to a temporary FO document and then it will be rendered to the desired output, which is a PDF file.
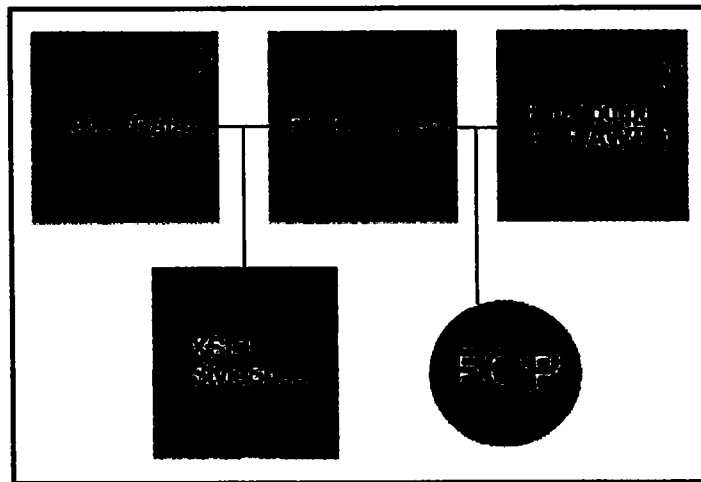


**Figure 4.4** Formatting Objects Processor (FOP) Architecture

In addition, Wikipedia gives the definition of XSL, XSLFO and XSLT shown as below;

> **XSL** (XML Stylesheet Language) is a W3C standard concerned with publishing XML documents. It consists of two parts: XSLT and XSLFO

> **XSLFO** (XSL Formatting Object) is an XML vocabulary that is used to specify pagination and other styling for page layout output. XSLFO can be used in conjunction with XSLT to convert from any XML format into a paginated layout.

> **XSLT** (XSL Stylesheet Transformation) describes the transformation of arbitrary XML input into other XML (like XSLFO), HTML or plain text. The "T" comes from Transformation. For historical reasons, a transformation is often also called a "style sheet".
>
> (http://en.wikipedia.org/wiki/Blogs: Retrieved: April 10, 2006)

<u>Feature requirements</u>

- XML and Metadata files for input data

- XSL file. Creating XSL is too complicated because of new posting editor (FCKeditor). It supports WYSIWYG, so a home stay owner can use many functions for posting contents on a blog. Thus, all functions that the posting editor supports should be taken into account of writing a XSL file.

- FOP program, which is installed on a server and runs with the following command:

```
fop –xml blogsdata?.xml –xsl blogsdata.xsl –pdf blogsdata?.pdf
```

- ? is the number of retrieved content, it is automatically created by the system.

### 4.1.4.3 Uploading to GSDLHOME directory function

- After the system automatically transforms a XML to a PDF file. All of PDF and metadata files will be automatically uploaded to the GSDLHOME/*import/data* directory of the GSDL system.

- The Metadata file and its detail are contained in a mapping of blog contents (PDF file). The example is shown as below;

```
<FileSet>
    <FileName>blogdata1\.pdf</FileName>
        <Description>
            <Metadata mode="accumulate" name="dc.Title">NEW WYSIWYG Editor</Metadata>
            <Metadata mode="accumulate" name="dc.Creator">lk</Metadata>
            <Metadata mode="accumulate" name="dc.Date">2006-03-04 17:36:15</Metadata>
            <Metadata mode="accumulate" name="dc.Type">Activity</Metadata>
            <Metadata mode="accumulate" name="dc.Contributor">Homestay10</Metadata>
            <Metadata mode="accumulate" name="dc.Publisher">Rayong</Metadata>
        </Description>
    </FileSet>

<FileSet>
    <FileName>blogdata2\.pdf</FileName>
        <Description>
            <Metadata mode="accumulate" name="dc.Title">AIT LOGO</Metadata>
            <Metadata mode="accumulate" name="dc.Creator">lk</Metadata>
            <Metadata mode="accumulate" name="dc.Date">2006-03-04 20:35:22</Metadata>
            <Metadata mode="accumulate" name="dc.Type">Activity</Metadata>
            <Metadata mode="accumulate" name="dc.Contributor">Homestay10</Metadata>
            <Metadata mode="accumulate" name="dc.Publisher">Rayong</Metadata>
        </Description>
    </FileSet>
```

**Figure 4.5** Blogsdata and Metadata Mapping

### 4.1.4.4 Build the resource to home stay digital library collection

Building the collection means bringing digital resources to a collection. In this feature there are two main processes. The first one is building the retrieval archive content from blog. The second is building a digital resource which is uploaded by an administrator or a home stay owner user.

This feature is necessary because

- It will reduce costs of communication and searching knowledge
- It provides a center of resources and it reduces time of searching for a particular information

Feature processes

- Automatically generates a new directory name /Data? inside the GSDL system.
- Upload PDF files from the result of 4.1.4.2 into the new /Data? directory
- Build the resource (blog content/ digital resource) inside home stay digital library collection by using building collection command line that was mentioned at Chapter 2. *(Building Collection in Greenstone)*

In fact, every step runs through a web browser, so the home stay owner just follows the links. They do not have to do anything manually because the system will automatically generates and produces the results.

## 4.1.5 Financial Supporting Feature

This is a common feature for business, which provides a basic financial support. Moreover, this private information contains information of guest history, expenses and incomes. This feature is also helpful for other similar businesses. These recorded results enhance business because

- it is easy to track back financial information
- it is easy and faster for searching and retrieving information
- all information stores in the system, so users can access them anytime

In order to provide this feature in the blog system, it needs to add more tables and fields in the database as needed. (More information is mentioned in the Appendix B)

## 4.1.6 Searching Feature

This is a new searching feature in the blog system, which supports a searching of content in both multiple blogs and digital library collections in GSDL. Moreover, it provides search by word and/or full text search. This feature is required because

- The home stay owners are the local people and most of them are novice in using a computer. However, if they want to search for things, they can just search it from the blog side and the results will return in to both systems. In fact, this is kind of giving an experience of digital library system to a home stay owner. After than if they have an experiences in digital library, they can use and search information directly to digital library system. Digital library system provides a metadata search, which will enhance information retrieval.
- Reducing their time for searching information to enhance their business because the digital library (greenstone) is integrated with the blog system. They will retrieve current information from the blog, and they receive reference information and

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knowledge resource from greenstone system, which relevant with the topic that they would like to know.

- Reducing costs of communication and searching knowledge because it is already exists inside the blog and the greenstone system.

## 4.2 Evaluation

### 4.2.1 Proposed framework overview advantages

The implemented framework provides the benefits as following

- It enhances the home stay business with supporting central website, which acts like a community and eases creating and retrieving information.

- It also encourages the community to share and to discuss about experiences, and to generate a new knowledge. The developed framework is already embedded in the blog and digital library with appropriate function, so it does not waste time to build from scratch.

- It reduces cost of time and communication to investigate information and the knowledge.

- It improves the searching because a user can use the blog system to search and retrieve information from systems, the blog and digital library.

### 4.2.2 Satisfaction of proposed framework characteristics with analysis requirements

Table 4.1 presents website characteristics from user requirements compared with implemented framework characteristics.

**Table 4.1** Satisfaction of proposed framework characteristics with user analysis requirements

| Requirements criteria | Government | Home Stay owner | Tourists | Proposed Framework Characteristics |
|---|---|---|---|---|
| Providing as information and knowledge central website | yes | - | - | yes |
| Providing as information and knowledge standard collection | yes | - | - | yes |
| Easy information creating, modifying and updating | yes | yes | - | yes |
| Easy information obtaining and reusing for home stay owner | yes | yes | - | yes |
| Providing a space for discussing or sharing information | yes | yes | - | yes |
| Providing email to members | yes | yes | - | no |
| Providing email question form | yes | yes | - | no |
| Providing search home stay by specific name | yes | - | yes | no |
| Providing search home stay by location | yes | - | yes | yes |

| | | | | |
|---|---|---|---|---|
| Providing information and knowledge search | yes | yes | - | yes |
| Easy using and understanding processes | - | yes | - | yes |
| Easy embedded picture with content | - | yes | - | yes |
| Providing member subscribe for tourists | - | yes | - | no |
| Providing album collection | - | yes | - | no |
| Serving 24 hours a day, can connect any time and from any place | - | yes | yes | yes |
| Providing sufficient and attractive home stay information | - | - | yes | yes |
| Easy to search information and facilitate their plan | - | - | yes | yes |
| Reduce time consuming | - | - | yes | yes |
| Easy to give a feedback or recommendation | - | - | yes | yes |
| Providing email page to friend | - | - | yes | no |
| Online booking | - | - | yes | no |
| Brochure requirement | - | - | yes | no |
| Providing top destinations | - | - | yes | no |
| Language selection | - | - | yes | no |

Table 4.1 illustrates that the user's requirements are mostly converged. At the government end, the proposed framework is satisfactorily used as the central information and knowledge website. With this, the government is able to distribute useful information directly to the home stay owner. This is initial assistance for the home stay owners to improve and run the business in a consistent manner. Furthermore, the home stay owners are able to have their own web blogs. The system provides an interactive agent that allows the home stay owner to create, modify and update their own web blogs simply. A Blog has a simple form that allows the home stay owners to easily explore and create new pages. Automated templates facilitate the home stay owners to add an article to the home page, and add the article to a category-based archive for example. Consequently, supported by home stay owners through the use of this framework, tourists will obtain high quality information while always updating the dynamic content. In addition, easily manipulated, the web blog is integrated with a digital library. The digital library will be used as a knowledge base for the home stay owner.

However, missing features for example, providing emailing a page to a friend, brochure requirement, subscription membership and providing an online survey form. All of this can be implemented and integrated into this framework later because the blog is very flexible. As well as providing email to members it is also easy to integrate it in to this system. This is done when creating a new user or member because it also asks for an email address. At the moment, many of open source album software systems are available, but one needs to find software which will work suitably with the blog system e.g. web album generator software, web picture creator software and photo wizard 1.0 software. The missing feature

which is most important is online booking. This feature is not ready or suitable with this framework because key people who use this framework are home stay owners with novice IT knowledge or experience. Moreover, online booking needs a high-quality database management system. But the home stay owner is not prepared to manage such a database. However, in that case a good solution is using email and/or telephone.

**Table 4.2** Comparison of home stay websites features in Thailand

| | The proposed Framework | Government Website | Private Website | Provider Website |
|---|---|---|---|---|
| **Blog Features** | | | | |
| - Discussion | Yes | Yes | Some | Some |
| - Homestay directory | Yes | Yes | No | Some |
| - Search content | Yes | No | No | No |
| - Member Service | Yes | No | No | No |
| - Archive content | Yes | No | No | No |
| - Guest history | Yes | No | Maybe | No |
| - Posting expense | Yes | No | Maybe | No |
| - Income info | Yes | No | Maybe | No |
| - Image | Yes | Yes | Yes | Yes |

From Table 4.2, it shows that the features of proposed framework are more facilitating than others.

Criterion meaning is clarified as below;

Yes    means that the websites provide that feature

Some   means that some websites of that certain group provides that feature

Maybe  means that the websites of that certain group might provide that feature

No     means that the websites do not provides that feature

**4.3 Discussion**

Regarding to visiting KlongRangJorakae home stay at Ayuthaya, this home stay does not have their own website. In the current day, one way of their advertising is leaving their information at TAT website with few of contents and without any images. They would like to have their own website, but they do not have any knowledge about it. Besides, for hiring someone to create website, they need to pay at least six thousand baht, which is quite expensive for them. Moreover, although they are novice in computer, they know how to use Microsoft word and internet in limited functions.

This is the reason why they would like to try and use this system. It can be a one of their alternatives to have their own website in order to collecting their information, discussing and sharing information with tourists and other home stay owners or even contact with the organization (TAT).

# CHAPTER 5

# CONCLUSION AND RECOMMENDATIONS

## 5.1 Conclusion

Obviously, this framework is a very useful tool because it supports the home stay owner to enhance home stay business. Many features are included in this system. For instance, the home stay directory feature eases of discovering home stay location, and the new of posting editor feature which improve of controlling the posting layout. In addition, the digital library collection feature contains blog archive contents, which is useful in reference information like business history, and other digital library resources, which is useful for home stay owner and local people to reduce cost and time of acquiring knowledge resources and searching feature.

The last feature that the system provides is the financial supporting. This feature is private information for each business, which collects guest history, expense, cost and incomes information.

In general, home stay owners do not have experience in this business. But when business starts, they need to advertise their products and services to the market in order to reach the potential customers. To do this, the best way is using website, can be accessed anywhere anytime, to advertise products and services.

This framework tools is satisfying with creating home stay community in Thailand. For example, if all home stays in Thailand have their own blog in the same website location (URL). It eases for government to supports and provides information for them. In additional, it is useful for tourists that they can visit only one site and they can get all information they need, such as where they can go and what they can do. However, the first priority of this framework tools is providing blog for home stay owners to have their own website that allows them to share their information and experiences with others. In fact, the system should be easy to learn and use.

Although, this framework is small and designed with limited scope, this can be used as a common framework for other business that has similar characteristics like home stay business such as SMEs (Small and Medium Enterprises) like OTOP product, handy craft product, and online sell product. This framework supports small business that owners do not have much money and experience in these particular businesses. They are still able to use these framework ideas to build the website, to support their businesses and to participate with potential customers.

In the future, if this business becomes more popular or it has been accepted more widely in the market, this proposed framework can be able to increase more features, such as integrating an album technology, an online booking, visualization for home stay location, sending page to friend and news subscriber.

## 5.2 Recommendations

This work can be extended with additional characteristics, especially presenting Thai language inside the blog and greenstone software. Some parts of this system do not work properly with Thai language. For instance,

- b2evolution blogging software
    - This search engine does not support Thai language. Even though it can post Thai languge, it does not provide searching in Thai keywords.

- Greenstone digital library (GSDL)
    - Greenstone Version 2.62 does not works properly with Thai language. The problem is when building a digital resource in Thai, such as a word document, and transforming it into a collection, the Thai font can not be read in the web browser but it is read in the document plug-in.

# APPENDIX A

# RELATED STANDARD

## A.1 Dublin Core

The Dublin Core is a set of metadata elements that designed specifically for non specialist use. It is intended for use when people describe electronic materials. The Table A.1 shows names and definitions of Dublin Core metadata.

Table A.1 Dublin Core Metadata Standard

Table 1 Dublin Core metadata standard

| Name | Metadata subtag | Definition |
|---|---|---|
| Title | Title | A name given to the resource |
| Creator | Creator | An entity primarily responsible for making the content of the resource |
| Subject and keywords | Subject | The topic of the content of the resource |
| Description | Description | An account of the content of the resource |
| Publisher | Publisher | An entity responsible for making the resource available |
| Contributor | Contributor | An entity responsible for making contributions to the content of the resource |
| Date | Date | The date that the resource was published or some other important date associated with the resource |
| Resource type | Type | The nature or genre of the content of the resource |
| Format | Format | The physical or digital manifestation of the resource |
| Resource identifier | Identifier | An unambiguous reference to the resource within a given context: this is the object identifier or OID |
| Source | Source | A reference to a resource from which the present resource is derived |
| Language | Language | A language of the intellectual content of the resource |
| Relation | Relation | A reference to a related resource |
| Coverage | Coverage | The extent or scope of the content of the resource |
| Rights management | Rights | Information about rights held in and over the resource |

# APPENDIX B

## IMPLEMENTATION RESULTS

### B.1 Home Stay Directory Tree



**Figure B.1** Home stay Directory Tree

Tree feature classified by region and province and sorted by Name for easy finding of home stay location.

### B.2 Posting Editor

#### B.2.1 Comparison between existing editor and FCKeditor Interface
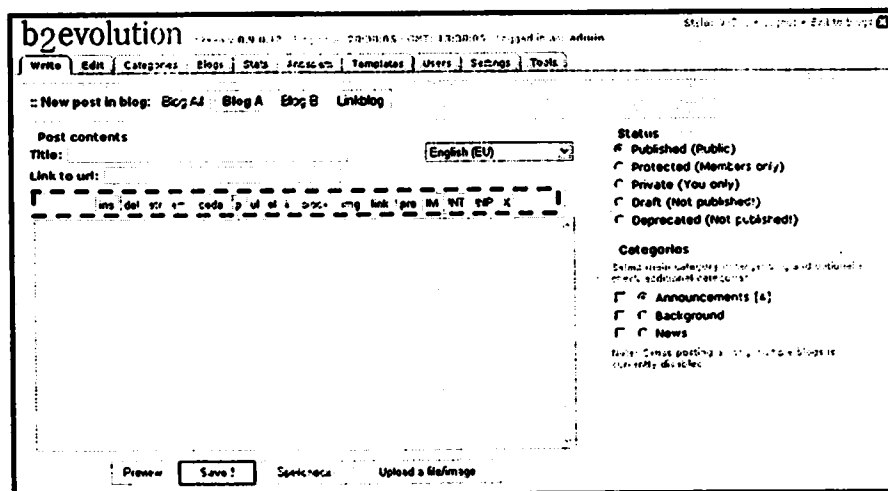


**Figure B.2** b2evolution Posting Editor
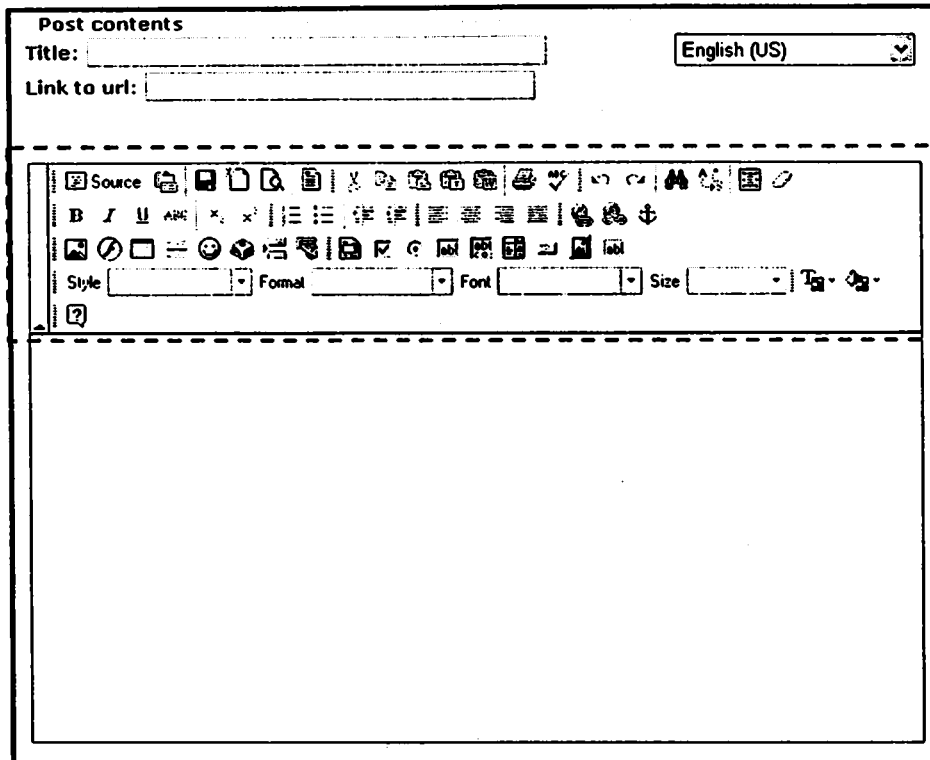
**Figure B.3** FCKeditor Posting Editor

B.2.2 Installing the FCKeditor in b2evolution

- Install FCKeditor on the root of web server, so we will have /FCKeditor on the root of the WEB server accessible via web.

- Next, edit *admin/_edit_form.php* of b2evolution installation and on line 13, insert

```
<script type="text/javascript" src="/FCKeditor/fckeditor.js"></script>
```

- Just before this line (approx. line 83)... that says :

```
<!-- ================= START OF EDIT FORM ================= →
```

Insert:

```
<script type="text/javascript">
window.onload = function()
{
  var oFCKeditor = new FCKeditor( 'content' ) ;
  oFCKeditor.ReplaceTextarea() ;
}
</script>
```

## B.3 Uploading Knowledge Digital Resource to Collection

This feature is consists of three functions:

1. Defining a resource location file

2. Describing a resource metadata using Dublin core standard.

3. Uploading file into GSDLHOME/import directory inside greenstone system



**Figure B.4** Describing file and Metadata of the Resource

## B.4 Retrieve Blog Archive Contents

Shown here are the three options provided for home stay owner on retrieving blog archive content: retrieve by month, category and author. The options are illustrated as follows:



**Figure B.5** Archive by Month



**Figure B.6** Archive by Category

**Figure B.7** Archive by Author

## B.5 Financial Support Feature

This feature is related to guest history, incomes and costs.

### B.5.1 Guest history

This feature provides records of guest history, bills or expenses and the printing of it. In every transaction, the home stay owner can track down who did it and when. If problems occur in some record, it is easy to find the one responsible for them.

1. Guest recording function

   This is for recording guest information and is divided into three parts: First part is for collecting general information; second part is for collecting duration and details of guest stay. The last part is for collecting overview commendation of guest by home stay owner or home owner providing guest services. Most functions provided in this feature are related to Add/ View and editing of guest information.



**Figure B.8** Guest Information Recording

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## 2. View and editing guest information function

The function allows home stay owner to view guest information by typing the guest's name, though there's no need to type the exact one since the system will retrieve the name based on the character typed in. It can also view guest information by month, shown below:



**View by Guest Name**

Name: `som`     [view]

**View by Month**

Select Month/Year: [Jan ▼] [2006 ▼]  TO  [Jan ▼] [2006 ▼]     [submit]

**Figure B.9** View Guest by Guest name and month

And result;



| GID | Guest Name | Check_IN | Check_OUT | Stay_OVER | | |
|-----|-----------|----------|-----------|-----------|---|---|
| 17 | Somjate Srirabai | 2006-03-05 | 2006-03-07 | 2 nights | add bill | print bill |
| | Remarks: They are friend and they work at the same place... They like a cleaning stuff... | | | | | |
| 18 | Somsiri Mesy | 2006-03-07 | 2006-03-08 | 1 nights | add bill | print bill |
| | Remarks: | | | | | |

**Figure B.10** View Guest Information Result

## 3. Billing or posting expense function

This function allows home stay owner to post and edit guest's expenses. And system will automatically calculate the expense's summary.



**Figure B.11** Posting/Editing Guest Expense

Guest Name : Somjate Srirabai

| Date | Item | Price | #Guest | Total Price |
|------|------|-------|--------|-------------|
| 2006-03-05 | 1-bed | 100 | 2 | 200 |
| 2006-03-05 | lunch | 100 | 2 | 200 |
| | | Net expense : | | 400 |

**Figure B.12 Bill Printing**

## B.5.2 Incomes Information

The home stay owner can view income of their business by month and year

Current BLog ID: 10 Today: 2006-04-11

View by Month

Select Month/Year: Jan ▾ 2006 ▾   TO   Jan ▾ 2006 ▾   Submit

From : 2006-01 to 2006-03

| NO | DATE | NAME | INCOME | |
|----|------|------|--------|---|
| 1 | 2006-03-01 to 2006-03-04 | Sumattaya Thammajak | 2500 | details |
| 2 | 2006-03-05 to 2006-03-07 | Somjate Srirabai | 400 | details |
| | | Net Incomes : | 2900 | |

**Figure B.13 Incomes Result**

## B.5.3 Costs Information

In this feature, the home stay owner or business owner can add and modify prices of their products and services. Four general categories are being provided consist of food, room, activity and others. Example of prices of every products and services are shown below:

| NO | ITEM NAME | DESCRIPTION | CATEGORY | PRICE | UNIT | STATUS | |
|----|-----------|-------------|----------|-------|------|--------|---|
| 1 | breakfast | ABF | food | 20 | person | open | edit |
| 2 | lunch | big lunch | food | 100 | person | open | edit |
| 3 | dinner | also big | food | 120 | person | open | edit |
| 4 | snack | fruit from the garden | food | 10 | person | open | edit |
| 5 | snack before dinner | | food | 15 | person | closed | edit |
| 6 | 1-bed | one bed for one person | room | 100 | person | open | edit |
| 7 | 1-house | house for a group that can stay btw 5-10 guests | room | 700 | group | open | edit |
| 8 | tracking | This trip start from early morning at 5.30 am and finished at 4 pm. Lunch included. | activity | 200 | person | open | edit |

**Figure B.14 Cost Items**

## B.6 Searching Feature

The existing search function inside blog provides searching for all words, some words or an entire phrase, see Figure B.15. The framework is supporting multiple blogs but searching in b2evolution technology offers a different search between the central or main page to other blogs inside the website. Central page searching will search and retrieve information from all blogs but in individual blog, searching will search information on their blog or only in the active blog. Moreover in this framework, with blog integrated into

digital library, new search engine will provide searching in both systems, as shown in Figure B.16



Figure B.15 Existing Searches



Figure B.16 Advanced Searches
(new search)

The framework solves the drawback of individual search by providing a new searching that can search information from all blogs, shown in Figure B.17



Figure B.17 Blog Advanced Searches (new search)

## B.7 XSL

```
<?xml version="1.0" encoding="TIS-620"?>
<xsl:stylesheet
        xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
        xmlns:fo="http://www.w3.org/1999/XSL/Format"
        version="1.0">
<xsl:template match="data">
<fo:root xmlns:fo="http://www.w3.org/1999/XSL/Format">
        <fo:layout-master-set>
    <fo:simple-page-master master-name="all"
                page-height="11.69in" page-width="8.27in"
        margin-top="1in" margin-bottom="1in"
        margin-left="0.75in" margin-right="0.75in">
                <fo:region-body margin-top="0.05in" margin-bottom="0.05in"/>
                <fo:region-before extent="0.05in"/>
```

```xml
                    <fo:region-after extent="0.05in"/>
            </fo:simple-page-master>
        </fo:layout-master-set>
        <fo:page-sequence master-reference="all" format="i">
    <fo:flow flow-name="xsl-region-body">
            <fo:block    font-family="AngsanaUPC"    font-size="2.25em"    text-align="left"
hyphenate="false"
            language="th"    line-height="1.2em"    line-stacking-strategy="font-height"    text-
indent="2.5em">
</fo:block>
                <xsl:apply-templates select="posting"/>
                <xsl:apply-templates select="comment"/>
                <xsl:apply-templates select="trackback"/>
        </fo:flow>
        </fo:page-sequence>
</fo:root>
</xsl:template>
<xsl:template match="post">
            <fo:block    text-align="start"    font-size="11pt"    font-family="sans-serif"
language="th" >
            <fo:inline color="blue" font-weight="bold">Blog Archive Content</fo:inline>
                <xsl:apply-templates select="title"/>
                <xsl:apply-templates select="date"/>
                <xsl:apply-templates select="author"/>
                <xsl:apply-templates select="blogname"/>
                <xsl:apply-templates select="province"/>
                <xsl:apply-templates select="category"/>
                <xsl:apply-templates select="content"/>
        </fo:block>
</xsl:template>
<xsl:template match="title">
            <fo:block  color="blue"  font-weight="bold"  space-before.optimum="3pt"  font-
family="serif">TITLE :
                <fo:marker marker-class-name="term">
                    <xsl:value-of select="."/>
                </fo:marker>
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
<xsl:template match="date">
            <fo:block text-align="start" start-indent="2em" space-before.optimum="12pt" font-
size="11pt" font-family="sans-serif">
```

```
                <fo:inline color="blue" >Date :</fo:inline>
                        <xsl:value-of select="."/>
                </fo:block>
</xsl:template>
<xsl:template match="author">
                <fo:block    text-align="start"    start-indent="2em"    font-size="11pt"    font-
family="sans-serif">
                <fo:inline color="blue" >Author :</fo:inline>
                        <xsl:value-of select="."/>
                </fo:block>
</xsl:template>
<xsl:template match="blogname">
                <fo:block    text-align="start"    start-indent="2em"    font-size="11pt"    font-
family="sans-serif">
                <fo:inline color="blue" >home stay Name :</fo:inline>
                        <xsl:value-of select="."/>
                </fo:block>
</xsl:template>
<xsl:template match="province">
                <fo:block    text-align="start"    start-indent="2em"    font-size="11pt"    font-
family="sans-serif">
                <fo:inline color="blue" >Province :</fo:inline>
                        <xsl:value-of select="."/>
                </fo:block>
</xsl:template>
<xsl:template match="category">
                <fo:block    text-align="start"    start-indent="2em"    font-size="11pt"    font-
family="sans-serif">
                <fo:inline color="blue" >Category :</fo:inline>
                        <xsl:value-of select="."/>
                </fo:block>
</xsl:template>
<xsl:template match="content">
                <fo:block    text-align="start"    start-indent="2em"    font-size="11pt"    font-
family="sans-serif">
                <fo:inline color="blue">Content : </fo:inline>
                        <!-- <xsl:value-of select="."/>  Don't ACTIVE THIS COMMAND-->
                        <xsl:apply-templates select="font"/>
                        <xsl:apply-templates select="p"/>
                        <xsl:apply-templates select="table"/>
                        <xsl:apply-templates select="div"/>
                        <xsl:apply-templates select="alt" />
```

```
                    <xsl:apply-templates select="img"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="content/font">
            <fo:block text-align="start" start-indent="4em">
                    <xsl:value-of select="."/>
            </fo:block>
    </xsl:template>
    <xsl:template match="content/p">
            <fo:block text-align="start" start-indent="4em">
                    <!-- <xsl:value-of select="."/> -->
                    <xsl:apply-templates select="table"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="p/table">
            <fo:block text-align="start" start-indent="4em">
                    <xsl:apply-templates select="tbody"/>
                    <xsl:apply-templates select="tr"/>
                    <xsl:apply-templates select="td"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="tbody">
            <fo:block text-align="start" start-indent="4em">
                    <xsl:apply-templates select="tr"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="tr">
            <fo:block text-align="start" start-indent="4em">
                    <xsl:apply-templates select="td"/>
                    <xsl:apply-templates select="alt"/>
                    <xsl:apply-templates select="img"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="tr/td/alt">
            <fo:block text-align="start" start-indent="4em">
                    <xsl:value-of select="@alt"/>
            </fo:block>
    </xsl:template>
    <xsl:template match="tr/td/img">
            <fo:external-graphic>
            <xsl:attribute name="src">file:<xsl:value-of
```

```
                      select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="td">
        <fo:block text-align="start" start-indent="4em">
                <xsl:value-of select="."/>
                <xsl:apply-templates select="p"/>
                <xsl:apply-templates select="font"/>
                <xsl:apply-templates select="img"/>
        </fo:block>
</xsl:template>
<xsl:template match="p">
        <fo:block text-align="start" start-indent="4em">
                <!-- <xsl:value-of select="."/> -->
                <xsl:apply-templates select="alt"/>
                <xsl:apply-templates select="img"/>
        </fo:block>
</xsl:template>
<xsl:template match="p/img">
        <fo:external-graphic>
        <xsl:attribute name="src">file:<xsl:value-of
                select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="td/img">
        <fo:external-graphic>
        <xsl:attribute name="src">file:<xsl:value-of
                select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="td/font/img">
        <fo:external-graphic>
        <xsl:attribute name="src">file:<xsl:value-of
                select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="div">
        <fo:block text-align="start" start-indent="4em">
                <!-- <xsl:value-of select="."/> -->
                <xsl:apply-templates select="font"/>
                <xsl:apply-templates select="img"/>
```

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```
                </fo:block>
</xsl:template>
<xsl:template match="div/font/img">
        <fo:external-graphic>
        <xsl:attribute name="src">file:<xsl:value-of
                select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="content/alt">
        <fo:block text-align="start" start-indent="4em">
                <xsl:value-of select="@alt"/>
        </fo:block>
</xsl:template>
<xsl:template match="content/img">
        <fo:external-graphic>
        <xsl:attribute name="src">file:<xsl:value-of
                select="@src"/></xsl:attribute>
        </fo:external-graphic>
</xsl:template>
<xsl:template match="comment">
        <fo:block    text-align="start"    font-size="11pt"    font-family="sans-serif"    space-
before.optimum="12pt">
        <fo:inline color="green" font-style="italic" >
                === COMMENT ===</fo:inline>
                <xsl:apply-templates select="cfrom"/>
                <xsl:apply-templates select="cdate"/>
                <xsl:apply-templates select="ccomment"/>
        </fo:block>
</xsl:template>
<xsl:template match="cfrom">
        <fo:block color="green" space-before.optimum="3pt">from :
        <fo:marker
                marker-class-name="term"><xsl:value-of select="."/></fo:marker>
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
<xsl:template match="cdate">
        <fo:block text-align="start" start-indent="2em">Date :
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
```

```
<xsl:template match="ccomment">
        <fo:block text-align="start" start-indent="2em">comment :
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
<xsl:template match="trackback">
        <fo:block    text-align="start"    font-size="11pt"    font-family="sans-serif"    space-
before.optimum="12pt">
        <fo:inline color="brown" font-style="italic">
                === TRACKBACK === </fo:inline>
                <xsl:apply-templates select="tfrom"/>
                <xsl:apply-templates select="url"/>
                <xsl:apply-templates select="tcontent"/>
        </fo:block>
</xsl:template>
<xsl:template match="tfrom">
        <fo:block color="brown" space-before.optimum="3pt">from :
        <fo:marker
                marker-class-name="term"><xsl:value-of select="."/></fo:marker>
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
<xsl:template match="url">
        <fo:block text-align="start" start-indent="2em">url :
                <xsl:value-of select="."/>
                <xsl:value-of select="href"/>
        </fo:block>
</xsl:template>
<xsl:template match="tcontent">
        <fo:block text-align="start" start-indent="2em">content :
                <xsl:value-of select="."/>
        </fo:block>
</xsl:template>
</xsl:stylesheet>
```

**Figure B.18 XSL**

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# APPENDIX C

## BLOGS CONFIGURATION

### C.1 Login Page

Two groups of users who can access the admin panel are administrator user and home stay owner user. The persons who have authority to access the admin panel should need to login to the system first.



**Figure C.1** Login Page

### C.2 Admin Panel

After logging in to the system, the system will authenticate the user. These two groups have different authorization and features as shown below:



**Figure C.2** Admin Panel



**Figure C.3** Home stay owner Panel

## C.3 Administrator User

### C.3.1 User Management

The system allows the creation of a new group and new user and be able to set group permission along with it. Sample below shows current groups and users of the system. Home stay owner user permission setting given at Figures. C.4 and C.5

| ID | Login | Nickname | Name | Email | URL | Level | | Edit |
|----|-------|----------|------|-------|-----|-------|---|------|
| 🖧 Administrators | | | | | | | | 🖧 🗐 |
| 1 | 🖧 admin | admin | | ✉mail | | 10 | - | 🖧 🗐 |
| 🖧 Basic Users (default group for new users) | | | | | | | | 🖧 🗐 |
| 2 | 🖧 demouser | Mr. Demo | | ✉mail | | 0 | + | 🖧 🗐 ✕ |
| 6 | 🖧 test123 | test123 | | ✉mail | | 0 | + | 🖧 🗐 ✕ |
| 🖧 Bloggers | | | | | | | | 🖧 🗐 |
| 8 | 🖧 blair | blair | Mr. Blair McKellar | | | S | - + | 🖧 🗐 ✕ |
| S | 🖧 cheryl | Bobby | Cheryl | ✉mail | | S | - + | 🖧 🗐 ✕ |
| 9 | 🖧 lk | LK | L K | ✉mail | | S | - + | 🖧 🗐 ✕ |
| 3 | 🖧 o | O | Lerluck Kuerklung | ✉mail | | 10 | - | 🖧 🗐 ✕ |
| 4 | 🖧 roma | roma | | ✉mail | | S | - + | 🖧 🗐 ✕ |
| 7 | 🖧 thander | | New user | | | S | - + | 🖧 🗐 ✕ |
| 🖧 Priviledged Bloggers | | | | | | | | 🖧 🗐 ✕ |

🗐 New user... · 🗐 New group...

**Figure C.4** Group & Users Management

Figure C.4 represents group of users and users of the system.

---

**Editing group: Bloggers (ID 3)**                [<<][<][>][>>] ⊠

General

Name: Bloggers

Permissons for members of this group

Blogs: ⦿ User permissions ◯ View all ◯ Full Access

Retrieve Blog Contents: ◯ No Access ⦿ Full Access

Build Resource to DL: ◯ No Access ⦿ Full Access

Guest History: ◯ No Access ⦿ Full Access

Incomes: ◯ No Access ⦿ Full Access

Costs: ◯ No Access ⦿ Full Access

Statistics: ⦿ No Access ◯ View only ◯ Full Access

Antispam: ⦿ No Access ◯ View only ◯ Full Access

Global options: ⦿ No Access ◯ View only ◯ Full Access

Templates: ☐ Check to allow template editing

User/Group Management: ⦿ No Access ◯ View only ◯ Full Access

---

**Figure C.5** Home stay owners Permission

Figure C.5 illustrates how to set group permission. It is concerned with authorization acquired by a group of users that can access admin panel. Tab Panel in admin is activated consequently.

## C.3.2 User Permission



**Figure C.6** User Permission

This figure represents how to set user permissions with as what they are authorize to do inside Blogs.

# APPENDIX D

## DIGITAL LIBRARY CONFIGURATION

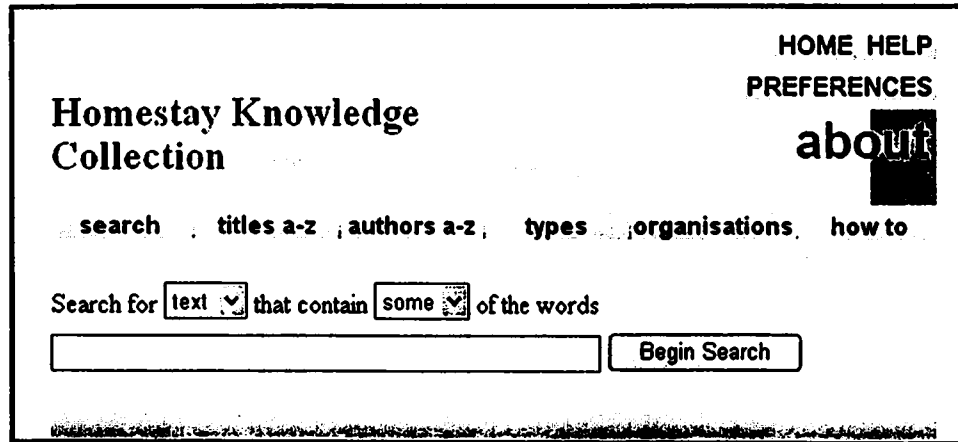### D.1 Digital Library Interface



**Figure D.1** Home stay GSDL Collection Interface

❖ There are six ways or six classifiers to find information in this collection:

- search for particular words

- access publications by title

- access publications by author

- access publications by type

- access publications by organization

- access publications by "how to" listing

❖ Designing Search for text and title which contain some or all of the words
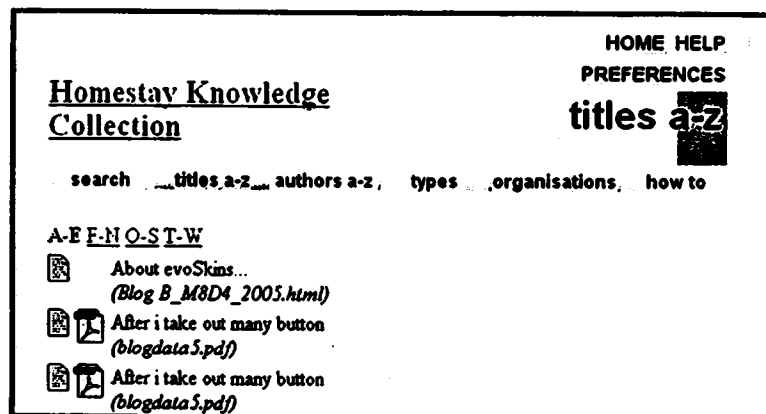
### D.2 Title Classifier



**Figure D.2** Title (AZList) Classifier

Results is classified by title of resource and ordered by alphabet. The user can open it with html page or original plug-in if it has. The result, when user browses the resource in html and pdf plug-in, the following illustration is shown at Figures. D.3 and D.4

TITLE : Other paste from Word.. (best way of Posting)
Date :2006-03-15 05:20:34
Author :lk
Homestay Name :Homestay10
Province :Rayong
Category :Activity
Content :
I
Data, Information, Knowledge
1. Data: A set of discrete, objective facts about events
· Typically, structured records of transactions
· Purchase: when, what bought, how much paid
· Not why, how likely to purchase again, etc.
· Quantitative measures of data management systems: cost, speed, capcity
· Data is important because it is the raw material form which information is produced'
2. Information: A message, usually in the form of a document or an audible or visible
communication.
=== COMMENT ===
from : admin
Date : 2006-03-16 02:25:36
comment : For the commnet, the user can't upload image or use any advanced features.
Wow!
but they can use advanced feature if they "edit" comment ... be careful
=== TRACKBACK ===
from : Homestay10
url : http://localhost/blogs/index.php?blog=10
content : Verdana Font with brHow can i change the default font from Arial to Verdana?
I live
verdana font. Select main category in target blog and optionally check additional
categories:
Note: Cross posting among multiple blogs is currently disabled.

**Figure D.3 HTML resource browsing**

TITLE : Other paste from Word.. (best way of Posting)

Date :2006-03-15 05:20:34
Author :lk
Homestay Name :Homestay10
Province :Rayong
Category :Activity
Content :
   I.    Data, Information, Knowledge

      1. Data: A set of discrete, objective facts about events
      · Typically, structured records of transactions
      · Purchase: when, what bought, how much paid
      · Not why, how likely to purchase again, etc.
      · Quantitative measures of data management systems: cost, speed, capcity
      · Data is important because it is the raw material form which information is produced.

      2. Information: A message, usually in the form of a document or an audible or visible
      communication.

=== COMMENT ===
from : admin
   Date : 2006-03-16 02:25:36
   comment : For the commnet, the user can't upload image or use any advanced features. Wow!
   but they can use advanced feature if they "edit" comment ... be careful

=== TRACKBACK ===
from : Homestay10
   url : http://localhost/blogs/index.php?blog=10
   content : Verdana Font with brHow can i change the default font from Arial to Verdana? I live
   verdana font. Select main category in target blog and optionally check additional categories:
   Note: Cross posting among multiple blogs is currently disabled.

**Figure D.4 PDF plug-in browsing**

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