Adopting Dublin Core with Modifications: Challenges and Requirements to Develop a Standard Metadata for UM Memory

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ABSTRACT
UM Memory was initiated by the University of Malaya Library to build up digital photo collection. It was officially launched by Royal Professor Ungku A. Aziz on 22 September 2011 and his historical photo in the University was the first online exhibition displayed in UM Memory. The purpose of this initiative is to make the Library photo collection accessible to the public through complete metadata. Metadata of the item must be informative in order to capture the digital user’s interest. Several challenges have been faced by the librarians because no standard has been recorded as a guideline since this project was the pioneer project for historical images repository in the University of Malaya. This paper presents the steps taken by the librarians to produce a proper metadata standard to be used in UM Memory. It compares few established metadata from several institutions worldwide and also discusses the significance of excellence pledge for metadata. Several considerations need to be highlighted to confirm the metadata can represent the images in the portal effectively.

Keyword: University of Malaya; UM Memory; University of Malaya Library; Metadata; Repository

1. Introduction
University of Malaya Library (UML) has initiated 3 digital repositories and each repository has its own dedicated functions. These 3 repositories are University of Malaya Research Repository (UMRR), University of Malaya Students Repository (UMSR) and UM Memory. Both UMRR and UMSR are handling data in text format and its contents are very useful for teaching, learning and research. UM Memory on the other hand, keeps data in image format and its content is very precious in terms of its historical and heritage values for the University of Malaya.

<table>
<thead>
<tr>
<th>ATTRIBUTES</th>
<th>UMRR</th>
<th>UMSR</th>
<th>UM Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Published and unpublished research work produced by the UM researchers</td>
<td>The written work of University of Malaya students such as academic exercises, dissertations and theses</td>
<td>Historical photo collection of the University of Malaya</td>
</tr>
<tr>
<td>Format</td>
<td>Text</td>
<td>Text</td>
<td>Image</td>
</tr>
</tbody>
</table>

TABLE 1
University of Malaya Library Repositories
As the oldest University in the country, the history of its establishment and its successful paths should be able to be tracked back in whatever type of record. UM Memory is able to perform this role by supplying those historical records in images format. In performing its role, the quality of information offered in UM Memory should be at certain level to reflect its reliability and credibility. Therefore, a standard metadata should be adopted as a guideline to ensure that UM Memory conforms to common criteria used in evaluating the metadata quality.

This paper focuses on efforts made by librarians in adopting Dublin Core (DC) metadata with the concern of completeness, accuracy and consistency metadata displayed in UM Memory repository. This paper also discusses on criteria used as guidelines for evaluating metadata quality in general. In addition, it selects few institutions to compare their practices with UM Memory practice.

2. Definition of Metadata and Dublin Core
Metadata is “structured data about data” (Dublin Core Metadata Initiative, 2011). According to National Information Standards Organization (2004), metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource.

Dublin Core (DC) is a metadata schema that arose from an invitational workshop in 1995. DC is made up of 15 metadata elements that offer expanded cataloging information and improved document indexing for search engine programs (Kurtz, 2010). The basic DC elements are:

1. Title - the name given the resource
2. Creator - the person or organization responsible for the content
3. Subject - the topic of the content of the resource
4. Description - a textual outline of the content
5. Publisher - those responsible for making the resource available
6. Contributor - those who added to the content
7. Date - when the resource was made available
8. Type - a category for the content
9. Format - how the resource is presented
10. Identifier - numerical identifier for the content such as a URL
11. Source - where the content originally derived from
12. Language - in what language the content is written
13. Relation - how the content relates to other resources
14. Coverage - where the resource is physically located
15. Rights - a link to a copyright notice.

All DC basic elements are optional and repeatable.

3. Background of the UM Memory Project
The University of Malaya is the oldest university in Malaysia that was established in 1949 by merging of the King Edward VII College of Medicine and Raffles College as
recommended by the Carr-Saunders Commission on University Education in Malaya to serve the needs of Singapore and the Federation of Malaya.

As the oldest University, there is a lot of University valuable treasures buried and need to be exposed. Among these valuable treasures owned by the University are in form of photos. UML takes responsible to preserve this treasure by beginning to collect and include those photos as part of its collection. UML’s main objective is to keep all photos which reflect the history of the University since its beginnings in the King Edward VII College of Medicine in 1905 until recent days.

At the beginning, only physical materials are kept in the Archives collection. Nowadays, with the rapid growth in technology, the digital version is now taking over the print version. UML realized that all information about the University should be disseminated and made known to University community and public as well. As the result, UM Memory project began in 2005 led by Information System Division.

3.1 UM Memory Repository
The word UM Memory is stand for University of Malaya Memory. The memory on the past, current and future of the University will be made available in UM Memory repository. Using free and open source, OMEKA as a platform and Dublin Core metadata to describe the resource, UM Memory function is to develop photo collection for teaching, learning and research purposes; to provide access to the collection; to keep historical photos on the University; to preserve and conserve the photos.

![Image 1]

Current UM Memory Interface
3.2 The Launching Ceremony of UM Memory
UML Management has decided to make UM Memory known to the public. The reason is to disseminate a new source of information that may benefit others. The launching ceremony was scheduled on 22 September 2011 and on this date UM Memory was officially launched by Royal Professor Ungku A. Aziz.

IMAGE 2
Royal Professor Ungku A. Aziz Launched UM Memory Repository

Royal Professor Ungku A. Aziz was a prominent figure in the University of Malaya. He was the first Malaysian Vice Chancellor of the University of Malaya and the longest serving person to hold the post. He served the University from October 1968 until February 1988. He is also known as Renaissance man.

IMAGE 3
Online Exhibition in UM Memory
As recognition to his devotion and contribution to the University and the nation, UML has decided to choose “The Renaissance Man” as theme for the exhibition. His glorious timelines including his photos was exhibited in UML exhibition hall and displayed online in UM Memory.

3.3 The Hands Over
At the beginning, UM Memory contents and system maintenance was under the supervision of Information System Division. A librarian was responsible to maintain its content and system.

In July 2014, UML Management decided to establish a special unit known as University of Malaya Archives Unit to maintain institutional repositories and archives collection of the University. Now, the University of Malaya Archives Unit is responsible for UM Memory contents while Information System Division is only responsible for system maintenance.

4. Requirements in Developing A Standard Metadata
UML has identified certain requirement needs to be considered before working on standard metadata and it is related to the quality of metadata. UML has to study on how to ensure the metadata displayed in UM Memory are high in quality.

As stated by Guy, Powell & Day (2004) that a definition that can be used in the context of metadata is high quality metadata supports the functional requirements of the system it is designed to support, which can be summarized as quality is about fitness for purpose.

UML has decided that a quality should be measured by certain criteria and matrices. Among the criteria and matrices; accuracy, completeness, and consistency are the most commonly used criteria in measuring metadata quality (Park, 2009). These three criteria are briefly discussed in UM Memory context by comparing the previous and the current practice.

4.1 Accuracy
Accuracy (also known as correctness) concerns the accurate description and representation of data and resource content. It also concerns accurate data input (Park, 2009). Librarians found several weaknesses in previous practice. Firstly, the same data value was repeated in two elements (e.g. Title element, for unknown resource, library barcode number was used as Title and it was used also at Identifier element). Second, inaccurate data entry traced because there were various individuals entered the data and there was a lack of quality control in checking back the data entered in the repository.

4.2 Completeness
According to Bruce and Hillman (2004), completeness does not mean that all the metadata elements in a given metadata scheme are used. The completeness of metadata description can be measured by full access capacity to individual local objects and connection to the parent local collection(s). This reflects the functional purpose of metadata in resource discovery and use. In UM Memory, the metadata elements are not
fully utilized to give as many information as possible about the resource (eg. only Title, Date, Format, Type, Identifier, Coverage elements was frequently used).

4.3 Consistency

Consistency (also known as comparability or coherence) can be measured by looking at data value on the conceptual level and data format on the structural level (Park, 2009). In other words, the consistency means the same data values or elements are used for delivering the similar concepts in the description of a resource. It also concerns on the same structure of format is used for presenting similar data attributes and elements of a resource. It was traced that the inconsistency in certain elements (e.g. Date, some data used format DD-MM-YYYY and others used format MM-DD-YYYY; Coverage, some data used Year, Place and others used Place, Year)

To sum up this point, librarian concluded that a standard metadata should be prepared to minimize the inaccurate, incomplete and inconsistent metadata description.

5. Adoption of Dublin Core in UM Memory

UML is using Omeka platform for UM Memory repository. Since Omeka comes with Dublin Core (DC), the Library has to adopt it with minor modifications. The discussion will only focus on photo collection.

5.1 Identification Process

The librarians try to adopt all 15 metadata elements from Dublin Core Metadata Element Set. In previous practice these elements are minimally utilized. Table 2 compares the previous and current practice on utilizing Dublin Core element set in UM Memory.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Previous Practice</th>
<th>Current Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Title</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>Subject</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>Description</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4</td>
<td>Creator</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>5</td>
<td>Source</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>6</td>
<td>Publisher</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>7</td>
<td>Date</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>8</td>
<td>Contributor</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>9</td>
<td>Rights</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>10</td>
<td>Format</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>11</td>
<td>Language</td>
<td>X</td>
<td>/</td>
</tr>
<tr>
<td>12</td>
<td>Type</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>13</td>
<td>Identifier</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>14</td>
<td>Coverage</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>15</td>
<td>Relation</td>
<td>X</td>
<td>/</td>
</tr>
</tbody>
</table>

(\ indicates used; X indicates not used)
5.2 Implementation Process
The librarians have to consider the criteria of metadata quality in preparing a standard metadata. After considering the criteria mentioned above, they have come out with a metadata standard prepared for UM Memory as shown in Table 3.

<table>
<thead>
<tr>
<th>Name</th>
<th>Library Definition on DC Elements</th>
<th>Comment</th>
</tr>
</thead>
</table>
| **Title**  | • Identified resource: the name of the resource  
• Unidentified resource: University of Collection #item number | Make use of “tags” in Omeka, by using “UM Collection” tag for unidentified resource. In case resource information can be traced in the future. |
| **Subject**| Standard local subjects using for newspaper cutting                                               | List of standard local subjects used for newspaper cutting in the library website |
| **Description** | Further description on the resource                                                                 | Further explanation on the resource                                   |
| **Creator**| • Identified creator: Name of person or institutional contributes to the existing of the resource  
• Unidentified creator: University of Malaya Archive | University of Malaya Archive is used for unidentified creator. The reason is because photo collection belongs to the University and University of Malaya Archives functioned as caretaker |
| **Source** | Only applied if the photo taken from a publication                                               | Includes information on publication such as title, author and page     |
| **Publisher** | Only applied if the photo taken from a publication                                              | Includes publisher information such as place of publication, publisher and year |
| **Date**   | • Identified photo date. Format (DD-MM-YYYY)  
• Unidentified date: unknown                                                                       | Add the actual date if the date can be traced and unknown for untraceable date. |
| **Contributor** | • Identified contributor: Name of person or institutional contributes to the existing of the resource  
• Unidentified contributor: University of Malaya Collection     | Add contributor name for identified contributor and University of Malaya Collection for unidentified contributor since the collection belongs to the University |
| **Rights** | This material is protected under Malaysia Copyright Act which governs the making of photocopies or reproductions of copyrighted materials. You may use the digitized material for private study, scholarship, or research with proper | UM Memory rights                                                      |
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<table>
<thead>
<tr>
<th>Name</th>
<th>Library Definition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>Photo format</td>
<td>TIFF</td>
</tr>
<tr>
<td>Language</td>
<td>Based on title and description language</td>
<td>It depends on the language of original caption (usually in Malay or English)</td>
</tr>
<tr>
<td>Type</td>
<td>Still Image</td>
<td>Applicable for photo collection</td>
</tr>
<tr>
<td>Identifier</td>
<td>Unique barcode</td>
<td>Automated generates by system</td>
</tr>
<tr>
<td>Coverage</td>
<td>Location and date of the resource. Format (Place, Year)</td>
<td>Includes information on location the photo is taken and year the photo is taken. If the location or date untraceable leaves it blank.</td>
</tr>
<tr>
<td>Relation</td>
<td>Resource relationship with other resource</td>
<td>Only applicable in essential situation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Library Definition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>acknowledgement to the University of Malaya Library.</td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>Photo format</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>Based on title and description language</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Still Image</td>
<td></td>
</tr>
<tr>
<td>Identifier</td>
<td>Unique barcode</td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td>Location and date of the resource. Format (Place, Year)</td>
<td></td>
</tr>
<tr>
<td>Relation</td>
<td>Resource relationship with other resource</td>
<td></td>
</tr>
</tbody>
</table>

5.3 Improvements
The librarians try to introduce some improvements to avoid inaccuracy, incompleteness and inconsistency of data in UM Memory especially for incomplete information of resource.

There are few examples of improvement that have been made in UM Memory. First improvement is due to unidentified suitable title for resource due to lack of information. They fill up the TITLE element with “University of Malaya Collection #item number” and use tag “UM Collection”.

In case, the information on the resource will be identified from other resources in the future. So, they just have to click on “UM Collection”, find the record and then fill up the missing part of information.
The elements that need to be enhanced will continue to be improved in accordance with future needs.

Second improvement is on the use of subject heading in UM Memory. Former practice, the subject is left blank. Now, it has been decided that the subject headings will be standardized with the subject on the newspaper clipping which is displayed on UML website.

This locally developed subject headings are used because they suit well to describe subjects related to the University of Malaya. These subjects will be enhanced from time to time based on necessity.
An example of full record based on current practice is as shown in image 8, 9 and 10 at appendix.

6. Challenges

Efforts to preserve digital information especially heritage photo have always been challenged by librarians worldwide. There is a lot of study conducted to explore the main challenge in developing digital initiative. There are several challenges and limitations that librarians have to deals in developing digital archive especially for photo collections. Below are some of the challenges highlighted based from UML experience.

6.1 Policies and Guidelines

There is no written policy and guideline recorded since this project was the pioneer project for historical images repository in the University of Malaya. Policies and guidelines are important to allow librarian to clearly comprehend roles and responsibilities within predefined limits. Policies recognize the crucial actions, activities and deliver a general approach to decision-makers on how to deal and handle issues arise. Librarians in UML need to set up clear vision and identify how to deliver effective metadata in UM Memory. Even though UM Memory are using Dublin Core as primary metadata, they need to study the effective element that the users need instead of delivering unnecessary metadata in the portal.

The definitive goal of every ‘guidelines’ is to deliver the staff with a clear and straightforwardly strategy of action compulsory to carry out or implement a policy. It is important to have well-written procedure because it helps to abolish mutual misinterpretations by categorizing job responsibilities and establishing boundaries for the jobholders. It is challenges to the librarian to set up proper guidelines in order to make sure the workflow of UM Memory are smooth.

6.2 Lack of Information Technology Expertise

Nowadays information technology (IT) plays a big role and become a vital and fundamental part of every business plan especially in developing systems and open access platform. The rapid growths of technology change the roles of librarians to be more flexible and techno literate. Basic HTML skill is needed to run UM Memory, but that skills are not enough. Since this project was the pioneer project for historical images repository in the University of Malaya, the librarians need to explore “backend” of UM Memory.

Digital repository can impact organization resources in terms of assets, time, technology and support. The lacks of IT skills are the major challenges face by the librarians. Even though UM Memory is using Omeka as a platform, the librarians need to study the technical part of UM Memory. Few things need to be highlighted such as maintaining the system, storage capacity, server, and the security of the system. UML current practice was the “backend” and maintaining part is operating by other division which is Information System Division. It is because of the limitation of skills in IT.
6.3 Division and Staffing
Currently UM Memory is operating from University of Malaya Archives Unit. There are 4 main businesses in this Unit which is archive collection development and 3 digital repositories as listed below:

   a) University of Malaya Research Repository
   b) University of Malaya Students Repository
   c) UM Memory

There is no specific dedicated librarian in charge of UM Memory. All of the librarians in University of Malaya Archives Unit are multitasking. This is a challenge for them to handle several repositories while at the same time to maintain the quality of metadata/content in UM Memory. Besides, policies and guidelines human resource is also one of the important elements to determine the success of any digital repository.

7. Observation-Based Comparison with Other Institutions
Benchmarking is a convenient instrument for evaluating and calculating current performance in certain organization. Benchmarking is also a tool to find new solutions in any organization. Benchmarking can be done to find a new procedure or enhancements to an existing procedure and system. The term metadata simply means data about data. It is the term most often used in the Internet community for what has been known in the library community as cataloging data or resource description. Comparison of metadata can helps UM Memory to provide better information needs by users. To set a standard metadata in UM Memory, a comparison between several institutions was conducted to give clear view the current practice adopted by UML. Table 4 shows the comparison of metadata from several institutions.

<table>
<thead>
<tr>
<th>LIBRARY / NO</th>
<th>PRINTS AND PHOTOGRAPHS ONLINE CATALOG (PPOC), LIBRARY OF CONGRESS</th>
<th>NORTHWESTERN UNIVERSITY LIBRARY</th>
<th>VISUAL INFORMATION ACCESS, HARVARD</th>
<th>UM MEMORY UNIVERSITY OF MALAYA LIBRARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Title</td>
<td>Creator(s)</td>
<td>Title</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>2. Creator(s)</td>
<td>Title</td>
<td>Work Type</td>
<td>Subject</td>
<td></td>
</tr>
<tr>
<td>3. Date Created/Published</td>
<td>Cultural Content</td>
<td>Date</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>4. Medium</td>
<td>Date</td>
<td>Topics</td>
<td>Creator</td>
<td></td>
</tr>
<tr>
<td>5. Summary</td>
<td>Subjects</td>
<td>Nationality /Cultural</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>6. Reproduction Number</td>
<td>Location</td>
<td>Location</td>
<td>Contributor</td>
<td></td>
</tr>
<tr>
<td>7. Rights Advisory</td>
<td>Source</td>
<td>Work Type</td>
<td>Rights</td>
<td></td>
</tr>
</tbody>
</table>
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<thead>
<tr>
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<th>PRINTS AND PHOTOGRAPHS ONLINE CATALOG (PPOC), LIBRARY OF CONGRESS</th>
<th>NORTHWESTERN UNIVERSITY LIBRARY</th>
<th>VISUAL INFORMATION ACCESS, HARVARD</th>
<th>UM MEMORY UNIVERSITY OF MALAYA LIBRARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Call Number</td>
<td>Technique</td>
<td>Note</td>
<td>Format</td>
<td></td>
</tr>
<tr>
<td>9. Repository</td>
<td>Materials</td>
<td>Repository</td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td>10. Notes</td>
<td>Measurements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Subjects</td>
<td>Style period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Format</td>
<td>Incription</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Collections</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Work Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Identifier</td>
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<td></td>
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<td>16.</td>
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<tr>
<td>23.</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are numerous similarities of metadata between UM Memory with other institutions. Table 5 below shows the similarities of each institution. UML decided to remain all similarities in creating UM Memory metadata. There are title, creator, date, rights, subject, location, and format. However, some of the institutions are using different keywords to display the metadata. For example, “Notes”, some of the institutions use “Description”.

UM Memory is using Dublin Core as a metadata. The Dublin Core is a 15-element metadata element set intended to facilitate discovery of electronic resources (Weibel, 2005). The characteristics of the Dublin Core that distinguish it as a prominent candidate for description of electronic resources fall into several categories. Some of the institutions are using DSpace and others photo storage software where might carry different metadata scheme and keywords. Expert shares that we need to use proper metadata because metadata organizes, arranges and tracks the entire digital lifecycle of vital information, including the developments, procedures and users that affect it, providing a accurate audit trail that can demonstrate invaluable or mandatory, in highly-regulated industries to organization at any point in time.
TABLE 5
Similarities of metadata

<table>
<thead>
<tr>
<th>LIBRARY/NO</th>
<th>PRINTS AND PHOTOGRAPHS ONLINE CATALOG (PPOC), LIBRARY OF CONGRESS</th>
<th>NORTHWESTERN UNIVERSITY LIBRARY</th>
<th>VISUAL INFORMATION ACCESS, HARVARD</th>
<th>UMMEMORY UNIVERSITY OF MALAYA LIBRARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Title</td>
<td>Title</td>
<td>Title</td>
<td>Title</td>
</tr>
<tr>
<td>2.</td>
<td>Creator</td>
<td>Creator</td>
<td>-</td>
<td>Creator</td>
</tr>
<tr>
<td>3.</td>
<td>Date Created/Published</td>
<td>Date</td>
<td>Date</td>
<td>Date</td>
</tr>
<tr>
<td>4.</td>
<td>Rights Advisory</td>
<td>-</td>
<td>-</td>
<td>Rights</td>
</tr>
<tr>
<td>5.</td>
<td>Subjects</td>
<td>Subjects</td>
<td>-</td>
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<td>6.</td>
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</tbody>
</table>

8. Conclusion

In conclusion, the quality of a digital repository represents by the quality of its metadata. It is important to have a standard metadata to ensure the accuracy, completeness and consistency of information presented to the public. UML tries to figure out the best way and the best practice to fulfill those criteria to confirm that the information delivered and understood well by public. Yet, the continuous improvement efforts in identified the lack of implementation will still on going.

REFERENCES


APPENDIX

IMAGE 8
An Example of Record Displayed on User Interface (1)

EMPEROR AKIHIKO AND EMPRESS
MICHIKO OF JAPAN DURING THEIR
VISIT TO THE UNIVERSITY OF
MALAYA

All Titles
Emperor Akihito and Empress Michiko of Japan during their visit to the University of Malaya

Dublin Core
Title
Emperor Akihito and Empress Michiko of Japan during their visit to the University of Malaya

Subject
University of Malaya—Visitors
University of Malaya—Events
**Description**
This photo was taken on Wednesday, 2 October 1991.

**Creator**
University of Malaya Archive

**Date**
2 October 1991

**Contributor**
University of Malaya Collection

**Rights**
This material is protected under Malaysia Copyright Act which governs the making of photocopies or reproductions of copyrighted materials. You may use the digitized material for private study, scholarship, or research with proper acknowledgement to the University of Malaya Library.

**Format**
TIFF

**Language**
English

**Type**
Still Image

**Identifier**
AS11982402

**Coverage**
Kuala Lumpur, 1991

**Contribution Form**
Online Submission
No

**Still Image Item Type Metadata**

**Original Format**
Photo

**Physical Dimensions**
(26 x 20 cm)

**Color**
B/W
IMAGE 10
An Example of Record Displayed on User Interface (3)

Location
University of Malaya Archive, Za`ba Memorial Library

Status
Digital copy is available

Box Number
81

Note
From folder AS33896652 [link] edited by JAR-3/7/2015

Files

Collection
Special Events in Campus

Tags
Royal visit, VIP Visitors

Citation

Previous Item

Next Item

{}%cite web %url=http://ummemory.um.edu.my/ummemory/index.php/items/show/1401 %title=Emperor Akihito and Empress Michiko of Japan during their visit to the University of Malaya %work=UM Memory %accessdate=13 July 2015}