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Digital Preservation Strategy: Center for Quranic Studies—Indonesia

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Abstract: The Centre for Quranic Studies (CQS) is the educational institution that has vision to implementing Qur’anic teachings in Indonesian pluralistic society. CQS tries to implement Qur’anic teachings with no conceptual tension in the society. It attempts to enlighten the society with continuity and harmony. This is relevant to the principle: maintaining the values which have already existed and accommodating newly positive values. CQS digital library was the first and the most complete Quran and Tafsir library in digital form in Indonesia. This library gives the ease for the community as user of the library in getting information about the contents of Al Quran. The library provides reference and services pertaining to actual, dynamic, comprehensive and high quality Quranic studies. The digital collection consist e-book, audio-video, the interpretation manuscript, books turats and contemporary software, and thesis. Realised that this digital collection was often accessed by the user, then the CQS digital library tries to maintain digital preservation continuously.

This paper discusses how the digital preservation strategy that was carried out by the CQS library, so that the digital collection could to be accessed by the user in a long period. This study is a qualitative research with descriptive design. This research data were acquired by interview, observation, and document analysis that were collected, reducted, interpretated, and presented in narration order. The result of this study shows that strategy which has been used by the Center for Quranic Studies Library in preserving their digital collections comprise of technology preservation, migration, and emulation.

Keywords: digital library, digital preservation, preservation strategy

Introduction

Library is an agent that aim to manage and provide information services to the users. In order to ensure sustainable access of information which provided in range forms (paper based and electronic), some extra efforts must be done as well. By raising the awareness of information preservation, both in physical forms and policies, would avoid the threats of information loss. Simply, if we do nothing to preserve information, it means that we will lose everything.

Nowadays, in regarding with the development of information technology, the information explosion within digital formats have became important parts of the library collection and services. The library, as an institution that manage information as well, has been trying to deliver a new concept of library, which known as digital library. Digital library is a library in which the collections are stored and distributed within digital formats. The concept of digital library were established from traditional library values, including preservation of information. Specific treatments and strategies must be done to support the sustainable access for users.
While library has decided to manage digital collection, the library also determined whether the materials will be preserved for a long or short time. If the library decided to keep for a long period, the librarians need decide what kind of preservation strategy and storage media that will be used. Does the material will be stored in a form of CD ROM, server, or even computer hardisk? Environmental criterias, storage media, and strategy policies must be established in order to ensure sustainability access of library collection. Preservation strategy needs to be develop in according with the effort to expand the life time of digital library materials.

Methodology

This is a qualitative research with the descriptive design. This reserarch is try to describe the preservation strategy which held by CQS Library and problems occured during the preservation activities. The data needed were acquired by doing observation and interview with informants. Literature study was also conducted to support research.

Digital Preservation Strategy at CQS

CQS Library does not have written policy on digital preservation. The preservation activities have been done by referring to a Standard Operating Procedure which contains a list of tasks and timeline that must be done by librarians. Chowdhury and Chowdhury (2003) explained that the preservation strategies must be developed since the library decided to manage digital collections. In order to preserve their digital collections, CQS library has been conducted some reliable strategies. These strategies cover three important parts; they are technology preservation, migration, and emulation.

1. Technology Preservation

According to Pendit (2008: 253), technology preservation is defined as efforts to maintain both software and hardware which are used to operate digital objects. In regarding with the preservation of technology, CQS Library has been carried out by using Foxit Reader Software to read digital objects on PDF formats. The use of Foxit Reader Software was decided by decision maker in aim to anticipate technology obsolescence in future. On the other hand, CQS library is also committed to maintain obsolescence hardware such as floppy drive.

2. Migration

There are some activities which have been carried out by CQS Library during migration process. They are:

a.) Format migration

This activity is done by migrating the old media which has been used to store information to the newest one. CQS library conducts this strategy by migrating audio visual collection in MPEF and DAT format to FLV format. It helps user for better access of audio digital collections and streaming. Effective storage capacity also gained from this strategy.

b.) Migration of the media (replication).

This activity is done by copying the data on a defined material which has similar logical structure.

Kenney (2010) explained that replication covered the activity of data backup and duplication of digital object. This kind of strategy must be done in order to prevent objects from the threats of data loss which may be caused by disaster or connection hack. It is often combine by maintaining the
duplicate data in different place. CQS library conducts this activity by creating back up data which are stored on external hard disc. This activity has been done since last year (2010). The duplicate data would be keeping by its stakeholder to prevent from the threats which might be caused by human error or even natural disasters. This strategy is suitable with Kahn's explanation (2004:19) which stated that the protection to digital collection covered the activity of data back up and to keep the duplicate data in a defined place, which is far from the main building.

3. Emulation

The emulation strategy that has been carried out by CQS Library is done by creating Virtual Compact Disc which is standalone at each computer. These efforts are regarding with Granger (2000: 4) who described that emulation could be done on three choices. They are emulating software, operation system, or hardware. In this case, CQS library tries to preserve digital objects by emulating software, so that the Al Quran software which need that virtual CD could be ruined and accessed by users.

From the discussions above, it can be concluded that CQS library conduct three digital preservation strategies: technology preservation, migration, emulation. However, the CQS library paid more attention and focus on migration strategy. Unfortunately, the implementations of these strategies were not going well due to unavailability of written policy. The CQS library needs to develop a written policy that covers provisions and steps in preserving digital materials for a better digital materials preservation management.

Problems of Digital Preservation

Authenticity

The authenticity issue on the digital preservation has always been a debate. It can't be refused that the authenticity of the digital collection has become an important part on preservation activities in accordance with the authenticity and integrity of digital material itself. The authenticity stated here is meant that the digital collection will not change or modified both format and content. From the aspect of authenticity of digital collections, CQS library always maintain the collections as well and never try to change or modify the information content inside. On the other hand, the CQS library does not have capability to identify whether the digital files (which were downloaded from the internet) have been modified from its original version or not. However, the CQS library is only acquired digital files from reliable sites, which contain complete description about page URL and title, copyright information, publishers, and so on. This strategy has been implemented in order to provide accurate and reliable information to users. The CQS library always tries to avoid the corrupt file possibility during the migration process. It is done in accordance with the integrity of digital object itself, so that users could access the digital collection as a whole.

Copyright

Beagrie and Jones (2008: 43) explained that the activity of copying (refreshing) digital material into the other media, encapsulating content, and emulating software are intended to be an activity that against copyright. In order to avoid the copyright violation, CQS library conduct the preservation strategy by digitizing manuscripts which are unpublished and have no copyright restriction. On the other hand, CQS Library is only maintain digitally born collections that covered an exclusive copyright notice which stated that the works can be distributed and published for syiar Islam (the interests of Islam), not for commercial purposes (so that the library must not pay license for that).
the other digital material which has copyright restriction, CQS library will not display the collection as a whole.

**Virus**

Webb (2003: 115) explained that the virus attack has become a crucial problem in the digital preservation. Viruses may cause damage the integrity of digital collections (file corrupt). Kahn (2004:20) stated that the best protection to solve computer problems (which has been caused by virus) can be done by installing antivirus software at each computer and networks. In regarding with Kahn, the CQS library installed an antivirus software *Avast* at each computer which regularly updated by using internet connection. Besides that, in order to complete the protection, the library also runs *Freese* software which locks *C: Drive* as well. This software is able to clean virus while the computer is turn off.

**Storage capacity**

The computer storage capacity will determine how many data and files could be stored inside. If it has only small capacity, the digital files that could be stored are limited. The CQS library also deal with this problem. The computer hardisk cannot keep the Al-Quran digital or the other files which has big size. To solve this problem, CQS Library is prefer to use the old Al-Quran software program which has small size than the newest one which have bigger size of files. The library takes this opportunity in order to keep the effective use of computer storage space.

**Conclusion**

CQS Library is the first digital library in Indonesia for the study of Al Quran which manages digital collections. The digital collections are provided in the form of full text, audio visual, Al-Quran software program, and big amount of digital books and manuscripts. In preserving their collections, the CQS library does not have a written policy. The preservation activities have been done by referring to a *Standard Operating Procedure* which contains a list of tasks and timeline that must be finished by librarians. The preservation strategies which have been done by the library cover three important parts, they are technology preservation, migration, and emulation. The CQS library maintain its digital collection on a centered server. However, the CQS library paid more attention and focus on migration strategy to preserve their collection.

During the preservation activities of the library collection, the CQS library has to deal with some problems. They are the lack of human resources (experts in digital preservation) and a bit knowledge of librarian on digital preservation techniques; virus attacks; and computer storage capacity. To solve the virus problem, the CQS library installed an antivirus software at each computer which regularly updated by using internet connection. And to deal with storage space, CQS Library prefer to use the old Al-Quran software program which has small size than the newest one which have bigger size of files. From the aspect of authenticity of digital collections, CQS Library only maintain digitally born collections that covered an exclusive copyright notice which stated that the works can be distributed and published for the interests of Islam, not for commercial purposes.

Furthermore, the CQS library needs to develop a written policy that covers provisions preserving digital materials in order to ensure sustainability access of information.
References


