

Lighting the Digital Darkness: Implementation of a University Digital Repository

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1 Introduction

Digital document management which refers to systematic storing, tracking and indexing digital document in a computer, is a challenge to any organization in modern era. Today, many documents are born in digital form. Therefore there is a chance of getting the document being hidden and even getting damaged. For this reason, many organizations tend to keep printed copies of the digital documents and maintain them in conventional archives/repositories. In long term, this is not an effective solution. It involves high amounts of cost, space and labour for maintenance of the physical archive.

Advancement of the Information Communication Technology (ICT) opens new ventures to find solutions for the problematic area of archiving. The solution is called a digital

repository (DR). It is identified as ‘an *electronic system that capture, preserves and provides access to the digital work products of community*’ (Foster and Gibbons, 2005).

The DR project at The Rajarata University of Sri Lank (RUSL) which is a state owned and consists of about 4000 students and 500 staff members population (Rajarata University of Sri Lanka, 2011), is an example for how a library can take leadership in building a university wide digital repository.

2 Planning

The DR project at RJSJ consisted of several phases. It included feasibility study, obtaining approval from the university management, and implementing the DR. Presently, the repository can be accessed through <http://repository.rjt.ac.lk>.

The total project duration was around five months of period.

3 Motivation behind the project

Following key motives can be highlighted.

- a. Saves physical space
- b. Supports archiving documents at different levels of their life cycles
- c. There was no central repository for archiving important born digital & digitized documents.
- d. Enables keyword & full text searching
- e. Promotes the concept of ‘Green University’ by reducing use of carbon based materials (Eg: documents and ink).

- f. Uplifts the university rank in Webometric evaluations.
- g. Increases visibility of the university in cyberspace, especially because these articles are indexed by search engines

Following concerns were frequently raised at meetings at advocacy, planning and implementation levels.

- a. Respecting the copyright law
- b. Authority control and security for highly sensitive documents (Eg: Council Minutes)
- c. Responsibility for addition of content
- d. Upgrading and maintenance of the system

4 Collection Building

The following collections were suggested at initial stage of DR implementation.

- a. **Theses:** The collection has a high demand. Postgraduate theses were concerned at the first stage
- b. **Research and scholarly publications:** Every year about 50-100 research publications are produced by the university academics. Most of them were not systemically indexed & organized in a central location.
- c. **Annual reports of RJSL :** The reports enable easy information searching and archiving an original copy
- d. **Past question papers (PQP):** One of the most demanded and enable effective search and archiving values of the materials

5 Finance & Budgetary Constraints

To overcome constraints, following guidelines were set;

- a. System be implemented on available hardware/other infrastructure in the university
- b. DR management software must be Free and Open Source (FOSS)
- c. Technical support easily available locally
- d. Project to be implemented in stage wise approach (Research Publications, Theses, Annual reports etc.).

6 Software Selection

The software selection is the most challenging task especially if FOSS is the choice, because there are many such applications available (Organ, 2007).

GreenStone ([www,greenstone.org](http://www.greenstone.org)) and DSpace (www.dspace.org) are the most popular DR management software in the world FOSS market. DSpace was selected over Greenstone, mainly because of the following factors.

- a. Some other leading universities and institutions in the country use DSpace as their DR (Eg: Open University of Sri Lanka, University of Colombo, University of Peradeniya, University of Moratuwa and the National Science Foundation (NSF).
- b. Technical help and supports locally available
- c. Being a web based solution, easy to manage even from a remote location.

Dspace sources state that there are more than 1000 institutes using the software (Dspace, 2012). Therefore it has a large & strong community around the world.

7 DR Installation

Dspace installation is a complex process and many discussion forums dedicated for the software have raised this matter. The RUSL sought external assistance to install, configure and customise. DSpace Version 7.2 was installed on a Server and it CentOS, a Linux variants is used as Operating system.

8 Customization

The customization is the biggest challenge in Open Source Software. After installation of Dspace, the front-end and configuration files were customised to suit the university requirement and also different collections were created for faculties and departments. All collections are made available to public without a restriction.

Security of system and database were ensured.

9 Staff Training

All staff members from data entry operators to librarians were trained to handle the DR. All level of staff members were easily grab the basic operation of DL and took confidence in a day. After training the system was allowed to staff members to play around and test their own. Method was very success and most of are confident with DL.

10 Challenges

The DR project itself was a challenge to the university, because of its salient features and the amount of decision making associated. Lack of pre-defined policies related to the matters arisen was major drawback. Written documents have to be prepared at National level regarding copyright and digitisation concerns. A proper disaster recovery plan of the DR is essential to keep the system up and running. It could also improve users' trust and system's reliability.

11 Conclusion

The setting up a digital repository is a challenge to an organization because it demands skills and resources. Dspace is more user-friendly in front-end management but installation and customization are difficult so it demands high level of ICT skilled labour in the initiation stage.

Lack of support of digital archiving policy and concern in the university is a barrier for maintenance of the digital archive. Librarians' role in the digital archiving is important and their responsibility of achieving cannot be ignored in an organization.

References

Annual report of Rajarata University of Sri Lanka. (2011).
Mihinthale: Rajarata University of Sri Lanka. pp. 2-6.

Dspace. (2012). Retrieved from <http://dspace.org>

Foster, N.F., & Gibbons, S. (2005). Understanding faculty to content recruitment for institutional repositories. *D-Lib Magazine*, 11(1).

Organ, M. (2007). Outsourcing open access, OCLC systems and Services. *International Software digital Library perspectives*, 23(4), 353-362.