SUMMARY

Digital library concept emerged during 1994, with the Digital Library Initiative phase I & II program in USA where lot of funding was made available.

Slowly, all over the world libraries realised importance of digital libraries and started creating digital libraries of important documents available with them. Initially major projects were initiated in USA and Europe.

After digitizing, libraries had challenge of organizing these collections. There were several commercial software available in the market which were initially used by big libraries where they had lot of funds. But the libraries from developing countries always had difficulties in managing the funds for creating successful digital libraries.

During 1997, Open Source Software (OSS) became quite popular all over the world and many organizations found a good relief to get rid of proprietary software solutions. Today, practically in all areas OSS solutions are available. In Library and Information Science also many Open Source Software applications are available and libraries have taken steps in using these tools for various library operations. OSS tools have made a revolution in libraries. In the area of digital libraries, many OSS tools are available for building digital libraries. Libraries have taken steps in using these software for building digital libraries for providing value added services to their library users.

With a number Open Source Software available for creating “digital libraries” it was necessary to identify them and evaluate these software to understand unique features supported by each software.

The present study is an attempt to evaluate available Open Source Software for building digital libraries (OSS-DL) against a set of defined evaluation criteria.

Sunita Barve
Research Student

Dr. A.R.D. Prasad
Research Guide
So far, no systematic study of these software was undertaken to know what are the different features of each software and how to evaluate these software against the set of defined evaluation criteria.

Evaluation of digital libraries is a very new subject and Evaluation of Open Source Digital Library Software is a more recent research area. Very few studies have been carried out so far in this area. Researchers are trying to work on how to Evaluate, Who should Evaluate, When to Evaluate digital libraries. Several questions are posed and yet very few attempts have been made in this area.

1. Objectives of the present study

The objective of the present work is to evaluate major Open Source Digital Library Software (OSS-DL) available free and preferably under Open Source License terms and conditions. The main objective or goal of the present work can be further divided into the following sub-goals or secondary objectives:

1. To identify a list of major Open Source Digital Library Software available for creating digital libraries on Internet.

2. To identify the evaluation studies carried out so far on Evaluation of Open Source Digital Library Software (OSS-DL).

3. To design a set of evaluation criteria for evaluation of selected Open Source Digital Library Software (OSS-DL).

4. To install selected candidate software for carrying out detailed evaluation study on a testbed environment.

5. To evaluate each selected software against the set of designed criteria such as content acquisition, content management, metadata submission and support, classification, information search/retrieval, access control, privacy and management, authentication and authorization, interoperability, ease of deployment of each software, security, scalability, backup/restore facility, user friendly interface, usability, transaction log analysis, copyright issues, load balancing, personalization, visualization, digital preservation etc.
6. To find out at what level digital preservation is supported in each software.

7. To enlist each criterion and against that evaluate each OSS-DL capabilities, along with its advantages and disadvantages which will help librarian to decide which software to be used for a given set of environment with a given set of features.

2. Scope of present work

All over the world libraries started creating Digital Libraries of important documents available with them. For managing digital documents, libraries have either commercial information management systems or open source software. Use of Open Source Software for libraries has grown in the last decade. Present study is focused on studying all the major OSS software available for creating Digital Libraries (OSS-DL).

Considering the fact that Open Source Software are free for use, it is of great help to developing country libraries. The implementation of OSS in libraries represents a method for improving library services and collections. There are couples of OSS-DL software available today. Each software satisfies a particular need. Since each of the software has different configuration, have used different standards, satisfies different needs for creating DL, it was felt to study these software in detail to find out intricacies in each software.

Therefore, it was very necessary to study all the major currently available OSS-DL with various factors which will help libraries to know what features are supported by each software, what are the installation steps, which software has sustainability to stay in future, what are the advantages/disadvantages of using each software. Hence the current study only cover all the major open source software available for creating Digital Libraries(OSS-DL). The study does not cover other open source software applications used in libraries such as library management software.

3. Hypotheses

1. Many of the Open Source Digital Library Software (OSS-DL) are in conformity with standards.
2. Digital preservation is not really yet been addressed by many of the OSS-DL software.

3. Interoperability, scalability are highly questionable aspects of many OSS-DL software.

4. **Methodology**

   1. After an extensive literature search on Internet list of open source digital library software available for building digital libraries are identified.

   2. Overview of digital libraries are undertaken.

   3. Study of evaluation part of methodology i.e. what is evaluation, types of evaluation etc. are undertaken as this study falls under evaluation criteria.

   4. Extensive list of evaluation criteria are defined for evaluating selected OSS-DL.

   5. Installation of each software is undertaken.

   6. Each software is evaluated against set of defined evaluation criteria.

   7. Finally, comparative analysis is carried out against each broad criteria to know different features supported by each software in a tabular form.

   8. The observations and suggestions are noted down and are included in the conclusion chapter.

5. **Organization of the present work**

   The present study is divided into the following chapters.

   **Chapter 1: Introduction**

   This chapter is an introduction that covers an overview of the entire research work. It includes a brief introduction, need for the present study, the scope, objectives, hypothesis and methodology used for the research work.
**Chapter 2: Overview of Digital Libraries**

This chapter gives detailed historical developments and features of the digital libraries/institutional repositories and open access to information that are dealt in the present study.

**Chapter 3: Evaluation Criteria Defined for Evaluating Open Source Digital Library Software (OSS-DL)**

This chapter starts with introduction to evaluation, work carried out in evaluation of digital libraries as well as work carried out in evaluation of open source digital library software. It then further describe in detail different evaluation criteria defined for evaluating Open Source Digital Library Software (OSS-DL). Each criterion is listed with proper explanation.

**Chapter 4-11:** Following chapters, 4-11 are divided further as:

**Chapter 4:** CDS-Invenio Digital Library Software Evaluation

**Chapter 5:** DSpace Digital Library Software Evaluation

**Chapter 6:** DoKS Digital Library Software Evaluation

**Chapter 7:** EPrints Digital Library Software Evaluation

**Chapter 8:** Fedora Digital Library Software Evaluation

**Chapter 9:** Greenstone Digital Library Software Evaluation

**Chapter 10:** MyCoRe Digital Library Software Evaluation

**Chapter 11:** SOPS Digital Library Software Evaluation

**Chapter 12:** Comparative Analysis of Software Evaluation

This chapter is a comparative evaluation of each software against broad evaluation criteria.

**Chapter 13:** Conclusion

This is the concluding chapter and presents the observations and suggestions made under various chapters. Here it is emphasized that use of open source tools in libraries is very essential.