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A Pilot Study on Design and Development of e-Book Software Tool (e-Sangrah)

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ABSTRACT : Present study is undertaken to provide an in-house Software Tool for M.P. Council of Science and Technology library, a special library having collection of some of Rare Books, Technical Research Reports, Conference Proceedings, Executive Reports, Annual Reports, News Papers, own Publications etc. It has Internet, Intranet within premises. This tool will provide digital form of high-use materials (A small collection of manageable size, and which is highly valued and that are in demand and more accessible.) it gives solutions to convert a hard copied book into an e-Book and also the facility to narrate a new book in e-Book format.

Keyword : e-book, digitisation, software, e-sangrah, metadata browsing.

I. INTRODUCTION

Preservation of knowledge is an ancient method, which in due course of time changes. Ancient methods of preservation were carving on stones, or metal plate to writing of leaf or paper reaches the digitization or say electronic preservation [1].

"A managed collection of information with associated services, where the information is stored in digital formats and is accessible over a network".

Many of State and National level institutions are planning or doing digitization their own information resources and some rare items. However the number is not upto the mark. Keeping in view of fast changing world and speed of updates the prime aim of libraries to keep their users upto date in their areas of interest.

In present study, an attempt has been made to develop an in-house software tool for MPCST for digitisation of its own repository.

II. MATERIAL AND METHODS

Objective : Following objectives are framed as :

1. Software tool will help in saving the books or records, which are degrading with time.
2. To help the user in restoring the precious documents and by converting them into the softcopy.
3. The software will help to provide a tool to narrate books in the same format of that of the e-Book.
4. The software tool can bind separate word files, which may appear like a booklet.
5. A special feature will also be provided which will help to user in managing all his documents, diaries, journals and his own personal online library.

Methodology : The software tool will be a windows application containing various sub-applications distinguished according to the task. The application will contain user-friendly Interface. The application will contain a database linked to the sub-application. The privacy of the user and the security of the stored data will be kept in concern as the login and password access facility will be provided.

The application will be divided in form of modules, as providing each module to independently linked to the database but at runtime all the module will work in co-ordination. Hence maintaining the integrity of the system.

The database will be containing the records related to the application & also the personal data stored by the user. The data linked to the application will be commonly accessible to every user where as the through password access. Same phenomenon will be applied to the module of online library and diary where the general library (provided in system) will be accessible to all where as user's personal library will be accessible to the concerned user.

Application Environment : Since it is a windows application it can run on any PC having operating system windows2000 server, Windows-XP (professional) and Windows-vista [2]. Additionally it will be requiring SQL-server [3] to be installed and also the Visualstudio-2003, [4] Framework 1.1 [5].

The application may be loaded on a server and will be accessible to multiple ports at the same time. The accessibility by multiple users at the same time will not affect the efficiency or the integrity of the system.

We may say e-Sangrah is a software tool that provides preservation, organization and dissemination services for digital collections. Software is used to construct a digital library, building indexes, that are used for searching and browsing. Users may search the collection by using keyword searches or they may browse through the collection by title or subject.

III. DISCUSSION

M. P. Council of Science and Technology has a number of books and also interesting and useful publications such as Madhya Pradesh Resource Atlas, Resource atlas of different districts of Madhya Pradesh, quarterly news letter, reports of M.P. Council of Science and Technology sponsored R & D projects, seminars, symposium etc. and many more. That consists of multiple unique collections under the one roof.

These publications were created with different tools using a variety of technologies such as WORD, HTML, XML and PDF, and are not based on a cohesive approach. Furthermore, the library needs to store and publish external content to meet needs of scientific staff. The current situation poses technical, financial and management problems. Considering above facts and views of library lack of technical staff and IT Professionals this approach resulted to :

- Provide a stable and extensible foundation to provide preservation and access services for end users, access and information sharing services for other information systems, provide a long term strategy for preserving, organizing, and disseminating locally developed and external content, provide a stable and extensible foundation to support reusable e-Book system.

e-Book software is an information management system that preserves, organizes, disseminates and manages locally developed documents and external documents with associated metadata. It will be one of the library's fundamental systems to provide services to fulfil users' and systems' needs. The system will manage growing digital content as a long term solution and supports the shift from a physical library to a hybrid of physical and digital libraries in a cost effective manner.

We may say e-Book System is a software tool that provides preservation, organization and dissemination services for digital collections. e-Book System is used to construct a digital library, building indexes, that are used for searching and browsing. Users may search the collection by using keyword searches or they may browse through the collection by title or subject.

By adapting the systems analysis process, In this system

A. Preservation

e-Book System has some features for long term preservation as its multiple plugging automatically convert files in common formats (*e.g.* Word, PDF,) to their corresponding HTML documents and keep the files in the original formats at the same time.

B. Metadata

e-Book System is very flexible in its metadata support. It may support any metadata sets if the desired metadata schema for the metadata set is provided [6].

C. Access

In terms of external access, MS-Sql-5 access as a data provider, The use of non-standard persistent URL allows users to access a digital object, but is unable to resist an object's changes in location and state. e-Book System only defines two kinds of users: general users, and administrators that meets our requirement of e-Book system.

D. System Features

e-Book system provides simple and painless processes for installation and collection building. A single installation file packs all modules, pluggings, a search engine and a web server together. Search results can be displayed by author, subject and collection.

How does it work ?

Software allows the user to create multiple collections on the local server. The software allows for the creation of several collections so it can group material by areas of interest and allow the material to be searchable and browsable. The search function is based on indexes that are full-text, grouped by paragraphs, by subject and by title. The browse function is facilitated by lists that the user can scrutinize: "lists of authors, lists of titles, lists of dates" [7]. Different collections have different browsing facilities.

The indexes are created during the building process from information in the collection information file or added specifically as a marker for the particular object. According to workers "the metadata browsing structure is built by a scheme of classifiers, which build browsing indexes of various kinds: scrollable lists, alphabetic selectors, dates and arbitrary hierarchies".

When new objects are added, they are merged into the collection automatically. The system looks for new objects and if it finds any, they are added to the collection and the indexes are rebuilt to include metadata about the new objects Fig. 1.

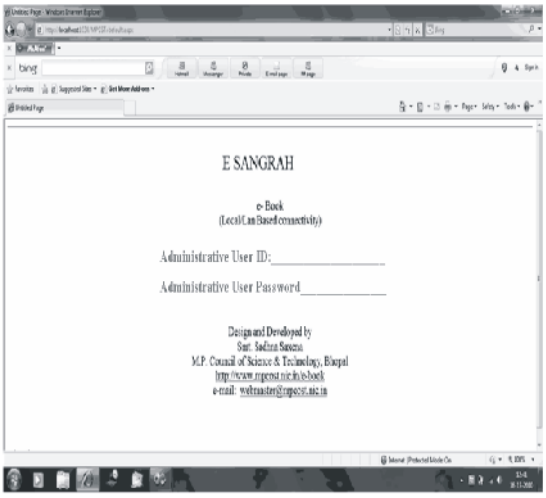

Fig. 1. Screenshot of e-Book Software Tool.

Advantages of e-Book Software Tool

The following attributes are key advantages of the e-Book Management software:

1. Users with basic technical skills can easily use the software.
2. It operates on Windows so there are no constraints to installation. Once installed, it is fairly easy to maintain.
3. The software is flexible and customizable - the interface can be modified to accommodate the needs of the user.
4. The collections can be built on portable media such as CDs and DVDs. It can also be distributed over the web.
5. It allows for dynamic collections - new additions to the collection are recognized and indexed automatically.
6. The system is extensible because plug-ins permits different document and metadata types.
7. It is browsable and searchable.
8. It supports the creation of more the one collection and end-users can create personal libraries.

IV. CONCLUSION

Institutional repository is the most powerful tool to publish and provide the efficient services among the community of institution. University Grant Commission also realizing and plan to include in their policies the importance of hosting resources activity of the institutions. They have encouraged institutions to create and develop their own institutional repository.

At the same time other Government agencies like Indian Council of Medical research, Council of Scientific and Industrial Research, Department of Biotechnology, Department of Science and Technology and Indian Council of Agriculture Research etc. are going to make compulsory for the institute to make repository.

Such repository is one of the most promising developments that utilize new ways of techniques to offer a viable and suitable alternative to the current model of scholarly publishing.

To follow the above facts, it is concluded the present study may be proven useful for institute and on the basis of above study other institutes may follow/ adopt the same for better and smooth functioning of respective libraries and information systems.

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