ABSTRACT
Purpose-This paper aims to describe BharathiLibnet, a centralized and distributed online information system based on open source software
Design/methodology/approach – The system is based on open source software (Koha, MySql, Perl, Zebra and Z39.50.
Findings - The findings of the study suggest that BharathiLibnet can serve as an ideal access tool for Bharathidasan University and its affiliated college libraries bibliographic information of books and serials and will enhance academic and research activities in the region by facilitate sharing of knowledge resources and familiarity on new resources to the academics and researchers of all participating institutions.
Research limitations/implications – This is an experimental prototype study and only selected samples were considered and examined. This will be investigated further with a wider population, which will improve the BharathiLibnet System.
Practical Implications – These results suggest that a system like BharathiLibnet could be applicable to all the affiliated colleges and other institutions in the region, which would help to serve the students and researchers working in colleges affiliated to Bharathidasan University in quickly accessing information from other institutes and thus save time, cost and labor in information processing and management.
Originality/Value – The paper describes the application of open source software (Koha) as a form of resource sharing tool and a single authoritative source of Bharathidasan University and its affiliated college library resources.
Keywords: BharathiLibnet, Online Catalogue, Library Networks, Koha, Document Delivery

INTRODUCTION
During the recent period quite a large number of libraries and information centers are forming union catalogue for sharing the resources among the participating Libraries. The advent of computer networking as an accepted part of the library and information infrastructure has had a very significant impact on the way in which library and information systems are perceived. India is thus on the threshold to a new era of computer communication networks both for general purposes and for library and information purposes. The following principles are motivated behind the union catalogue:

- Maximizing the utilization of existing information resources/collection by sharing
- Providing speedy access to information resources located at different places through communications channels for mutual benefit.
- To avoid duplication in the information process and control over the collection.

The escalating cost of information resource materials, increasing cost of processing documents and their information contents, decreasing budgets in terms of real worth and wide use of computers have also contributed to the development of union catalogue.

CONCEPT OF UNION CATALOGUE
Union catalogue in the broader sense can be any formalized system of information exchange. But, in modern union
catalogue, technology is utilized to link libraries, specialized data resources, or individuals to the persons or institutions in need of information. A union catalogue usually consists of a formal arrangement whereby materials, information, and services provided by a variety of libraries and other organizations are available to all potential users. Libraries may be in different jurisdictions but agree to serve one another on the same basis as each serves its own constituents. Computers and telecommunications may be among the tools used for facilitating communication among them.

WHY BHARATHILIBNET?

- Growth of Knowledge in different subjects
- Rapid increase of literature and growth of publications
- Increasing trend of new born subjects and specializations
- Limitations of funds
- Increase in the cost of publications
- Increase in the number of members of user community
- Similarity in curriculum, teaching, learning and research process.
- The information needs of academic community being wide in scope and varied in nature.
- Such information needs being often repetitive and recurring
- Lack of environment to make use of available computer and communication technology for efficient and productive use in libraries.

Therefore some resource sharing is necessary between one library and another library to acquire more information in a specific subject with low cost as published records are increasing at an incredible rate and their prices are keeping pace, in such circumstances library cooperation will assume a pivotal role and resource sharing will become the focal point of cooperation.

OBJECTIVES

- To develop a union catalogue database of print and electronic document sources in Bharathidasan University and its affiliated college libraries.
- To provide bibliographic access to the information resources available in the college libraries affiliated to Bharathidasan University.
- To utilize the resources in a better way, by disseminating the specific areas of interest available in the region.
- To generate new services and to improve the efficiency of existing ones.
- To develop forums for interaction among information professionals and users and thereby, helping them seeking solutions to common problems.
- To promote and support adoption of standards in library operations.
- To provide a common platform for document supply requests.

REVIEW OF LITERATURE

Banieghbal (2001) investigated the situation of 34 libraries affiliated with Tehran University in terms of their organizational structure, information and human resources, and facilities and services. Also examines the feasibility of establishing an information network, and discusses the grounds for cooperation among libraries and its impact on resource sharing in order to offer information services more effectively and quickly. Finally established an information network among libraries affiliated with Tehran University could considerably improve the status of information and technical services. (2003) describes the Penang Library Network (PLN) is a network of private and public higher education libraries formed with the aim of bringing Penang’s citizens to the forefront of uniform access to a knowledge warehouse through the use of information and communication technologies. Khan (2005) describes the resource sharing and networking activities among universities in Pakistan in 2005. The Pakistan Education and Research Network connect all the public and private universities in the nation through a high-speed network. It allows real time transfer of audio and video, multimedia-enabled lectures and remote research partnership. Zhang (2009) describes the construction of resource library-based network teaching platform of English extensive reading course is the actual manifestation of the rapid development of network communication technology and multimedia technology. The network-teaching platform mainly is composed by curriculum-teaching platform, the management system and auxiliary teaching resource library.

SCOPE

Bharathidasan University has four constituent colleges and 107 Affiliated Colleges. All the 107 affiliated colleges have independent libraries. A number of these libraries have already computerized their housekeeping operations and have created bibliographical databases of their collections. BHARATHILIBNET will develop a resource-sharing model by which all participating libraries can avail inter-library loan and document delivery services. In the proposed model the online union catalogue will students and faculty at the Bharathidasan University and any of the colleges to search for required monographs, serials, conference proceedings, articles. The study also aims at collects academic and research interest of the region. The bibliographic records of Books will be updated in union catalogue of books under UGC-Infonet. The author has given an overview of proposed network model.
ARCHITECTURE OF BHARATHILIBNET

Fig. 1 Architecture of BHARATHILIBNET

SERVICE AREAS OF BHARATHILIBNET

Fig. 2 Service Area of BHARATHILIBNET

METHODOLOGY

The methodology employed for developing BHARATHILIBNET is outlined as follows;

Technology Platform

- Linux operating system: Ubuntu 10.4 version
- Open source library management system: KOHA
- Database: MySQL
- Programming Language: Perl
- Search engine: Zebra and Z39.50

The online union catalogue has developed based on open source software. KOHA Open Source Integrated Library Automation Software has installed at the University Central Library. Koha library management system modules were customized for online union catalogue model. Metadata was created as to the MARC 21 format and multiple library databases were created. 5, 20,000 bibliographic records pertinent to selected library surveyed were converted into MARC 21 format and the same has been imported into KOHA.

The following MARC tag has been used to describe the respective records

<table>
<thead>
<tr>
<th>Tag Name</th>
<th>Descriptions</th>
<th>Tag Name</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Call Number</td>
<td>100$a</td>
<td>Personal Author Name</td>
</tr>
<tr>
<td>245$a</td>
<td>Title of the Book</td>
<td>250$a</td>
<td>Edition Statement</td>
</tr>
<tr>
<td>260$a</td>
<td>Place of Publication</td>
<td>260$b</td>
<td>Name of Publishers</td>
</tr>
<tr>
<td>260$c</td>
<td>Date of Publication</td>
<td>942$c</td>
<td>Item Number</td>
</tr>
<tr>
<td>850$a</td>
<td>Holding Institution</td>
<td>952$s$a</td>
<td>Home Branch</td>
</tr>
<tr>
<td>952$b</td>
<td>Holding Branch</td>
<td>952$s$p</td>
<td>Accession Number</td>
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<tr>
<td>952$s$0</td>
<td>Available</td>
<td>952$s$c</td>
<td>Shelving location</td>
</tr>
<tr>
<td>952$s$g</td>
<td>Cost, normal purchase price</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BHARATHILIBNET – HOME PAGE

This below figure shows that the main page of BHARATHILIBNET and it gives the information about the participated libraries, the types of resources available with their libraries and instruction to search the catalogue effectively. This provides the external links of open access resources, Institutional repositories and other useful resources for teaching and learning.
SEARCH / BROWSE INTERFACE

This user interface allows the faculty and students to search the bibliographic details of books, journals and other bibliographic records from BHARATHILIBNET server. There are ten search fields are given such as Keyword, Title, Author, Language, Publisher, Publisher Location, Subject, Series Title, ISBN and Call Number.
DISPLAY OF OPAC OUTPUT

OPAC and online union catalogue of BharathiLibnet can be accessed and viewed by selecting field name then enter the search term and click on ‘search’ button. It will show all the bibliographic record of books on the basis of search term with respect to search field. Book jacket is also enabled for better visualization. As shown on below fig.5.

Fig. 5 : OPAC – Output Search

SELECTION OF LANGUAGE AND TYPE OF DOCUMENTS

Unicode system has been enabled in this networked model to search user’s respective language, also can select / search the resources by selecting the particular library database for a quick retrieval. As shown below fig 6 and 7.

Fig. 6 : Selection of Type of documents and Language - OPAC Search Screen
ACCESS OF MULTI-LANGUAGE RESOURCES

The below figure displays the resources that are available in multiple languages and it would support the user’s community to view their bibliographic details in their respective languages.

Fig. 7 : Multi-type Language Resources

BIBLIOGRAPHIC DETAILS AND ITS LOCATIONS

The below figure displays the bibliographic details of a selected record with its available locations like institution name, status, call number and other relevant information.

Fig. 8 : Bibliographic Details and its Locations
SERVICES PROVIDED BY BHARATHILIBNET

☐ The Union Catalog is a source for searching for and finding a particular document, or gathering information about documents concerning certain topics that are available in the institutions of this region.

☐ Provision of reference and inter-library services, i.e. sending a loan request to ILS, where the identifying data for a library are generated from the directory and the document data from the record in the Union Catalog;

☐ The Union Catalog allows the user to locate the library that holds the document in question, and possibly also to obtain detailed data about the documents shelf mark, usually facilitating the borrowing of the document.

☐ The Union Catalog makes it possible to act on a request to borrow a document or request its copy (Inter-library Loan Service—ILS).

CONCLUSION

The free flow of information and knowledge is a basic prerequisite for the development of modern societies. The coordinated creation of and access to library catalogs, relying on modern technology, make significant contributions to the society development. Long-term practice supports the belief that one of the most effective instruments for promoting the free flow of knowledge is the union catalog and the best method for creating it is cooperative cataloging, which is labor-saving and contributes to the quality education. The fundamental principle in creating a union catalog is the controlled harvesting of data of the broadest possible scope, with the aim of creating a concentrated information base and a qualitatively and quantitatively rich source of secondary documents (records). This principle, if followed, allows for the introduction and development of additional services for the users of libraries and information institutions, as well as for librarians themselves. This kind of initiative in regional and root level would integrate the rich information environment with ease access of sustained quality in Library and Information Services.

REFERENCES


