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Bridging the Information Divide among Engineering College Libraries in Tamil Nadu, India: A Network Design

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Introduction

Libraries provide support to engineering colleges for achieving college goals through ensuring quality library and information services. It is crucial to bridge the information divide in engineering college libraries, because of the growth of engineering literature, increasing costs, and declining budgets, and the importance of user satisfaction.

Global Networks

Library networking as a means of resource sharing had its beginning in the 1970s and developed during the 1980s. Libraries in all countries of the world have adopted some form of networking. As early as in April 1976, the Library of Congress Network Advisory Committee (NAC) looked at options for a national system for sharing bibliographic information.

OCLC is the largest library network in USA. It was established in 1967, and supports resource sharing in more than 6,000 libraries. In Canada, Simon Fraser University, the University of British Columbia, and the University of Victoria established TRIUL in 1970. There are three major networks in UK: the VINCOUNT Project; LIBERTAS Project of SWALCAP; and JANET. JANET is the major network connecting the libraries of universities and polytechnics. College Libraries Activities Network of New South Wales (CLANN) and Co-operative Action by Victorian Academic Libraries (CALVAL) are the best-known networks in Australia.

Networking in India

Resource sharing in a networked system has been functioning since 1930 in developed countries, while India has concentrated on interlibrary loan. Networking activities in India started with the establishment of National Information System for Science and Technology (NISSAT) in 1979. Some of the examples of such Wide Area Network (WAN) networking are INDONET (INET), National Information Centre Network (NICNET), Information and Library Network (INFLIBNET) and Developing Library

Network (DELNET). CALIBNET and MALIBNET are typical examples of Local Area Networking (LAN) system, which is now ongoing in libraries of metropolitan cities like Calcutta and Chennai.

Engineering Colleges in Tamil Nadu: An Overview

Anna University was established in 1978 in Tamil Nadu. Since December 2001, it has grown and gained a reputation, having brought into its fold about 225 self-financing engineering colleges, six government colleges, and three government-aided engineering colleges located in various parts of Tamil Nadu. It offers programs in engineering, technology, and allied sciences relevant to the current and projected needs of society. Besides promoting research and disseminating the resulting knowledge, it fosters cooperation between the academic and industrial communities.

Objectives of this Study

The objectives of this study are

- To recommend networking of engineering college libraries in Tamil Nadu
- To propose a design for Tamil Nadu Engineering College Libraries Network (TECLIBNET).

Literature Review

The amount of information available on resource sharing and networking is huge. Though the practice of resource sharing is as old as librarianship itself, the introduction of information technology in libraries has brought this idea to even more prominence. This literature review touches on a few notable studies in this area. Nonglak surveyed the university libraries in Thailand and proposed a plan for a university library network in that country. Khurshid looks at library services in fifteen universities in Pakistan and finds no systems of library cooperation or networking. He stresses the need for resource sharing under the central government and suggests creation and maintenance of an updated union list of serials. Frederik describes the national plan for university libraries in Brazil, and recommends a centre for cooperative cataloguing, a standard format for computerized cataloguing, and development of an online network. Fritz and Baldock looked at Canadian resource sharing, finding that university libraries in Saskatchewn used resource sharing methods in support of distance education. The literature reflects the extensive work in numerous countries on resource sharing and networks, includung libraries in the United Kingdom, France, Germany, Japan, Netherlands, and others.

TECLIBNET

This study proposes a design for networking engineering college libraries in Tamil Nadu, India, which may be called Tamil Nadu Engineering College Libraries Network (TECLIBNET). The TECLIBNET is a computer communication network of engineering college libraries, which would improve resource sharing and information access for the academic community in Tamil Nadu. It is a cooperative network that will contribute to sharing and optimizing resources, facilities, and services of engineering college libraries in the state. It also aims to develop a programme of modernization for those libraries.

Objectives of TECLIBNET

The network would minimize duplication, provide services to users, avoid foreign exchange, and overcome financial constraints.

The following objectives are proposed for the TECLIBNET.

- Create a state-wide network of engineering college libraries for optimum use of information resources;
- Maximize the use of funds by reducing duplication;
- Provide access to document collections of all the engineering college libraries in the state;
- Improve interlibrary loan services among engineering college libraries with smooth and speedy exchange of information through telecommunication links;
- Standardize library services and activities;
- Facilitate communication among engineering college libraries in the state;
- Encourage cooperation among engineering college libraries, special libraries, and information centres in the state;
- Provide access to other national and international networks.

Steps to Implementation

Considering existing infrastructure, financial resources, manpower, and technology, the implementation of TECLIBNET has three phases.

In the first phase, the entire infrastructure for library automation and networking will be created and the personnel trained. The libraries will create machine-readable catalogues, automate all services, and prepare to join in the network. The second phase would culminate in the creation of the formal network, linking of all libraries into the network, and introduction of various services though the network. In the third phase, the libraries of special universities and research organizations would be brought into the network, and the network will join hands with other local, regional, national, and international networks.

Networking Models

Keeping these considerations in mind as well as the recommendations and counsel of participating libraries, three models are suitable for TECLIBNET.

1. Linking of homepages of all engineering college libraries in Tamil Nadu.

2. Creating an integrated library database.

3. Establishing connectivity using search-engine architecture.

Model I

In this model, which is the simplest, the home pages of all engineering college libraries in Tamil Nadu will be associated.

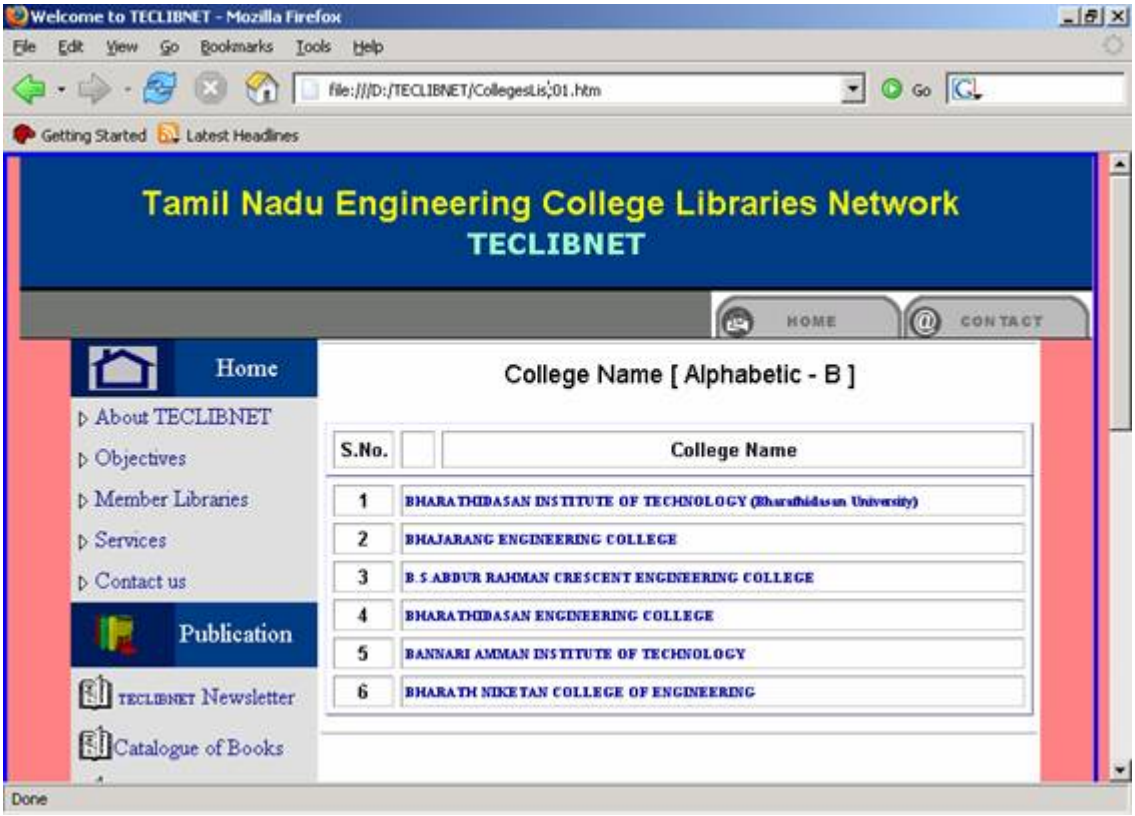


Fig. 1 TECLIBNET linked with other college Libraries

All engineering colleges in Tamil Nadu have home pages with a link to the library. Similarly, member libraries of TECLIBNET have independent web pages. Since these pages will exist independently, a scientist looking for a document will be able to find it. At present, most of the engineering college libraries have Internet connections, and it is hoped that the others will get that connection soon.

Fig. 2 Web portal of Bannari Amman Institute of Technology Library

Model II

In this model, the databases of all individual libraries will be merged. The merging of books and journals will use a unique feature such as ISBN. Since the physical location is one of the fields in the data entry form, it is not difficult to reflect it in the merged database. This has a major advantage from the user's point of view. It will be less time-consuming, since the user will have to access only one server where the integrated database will be located.

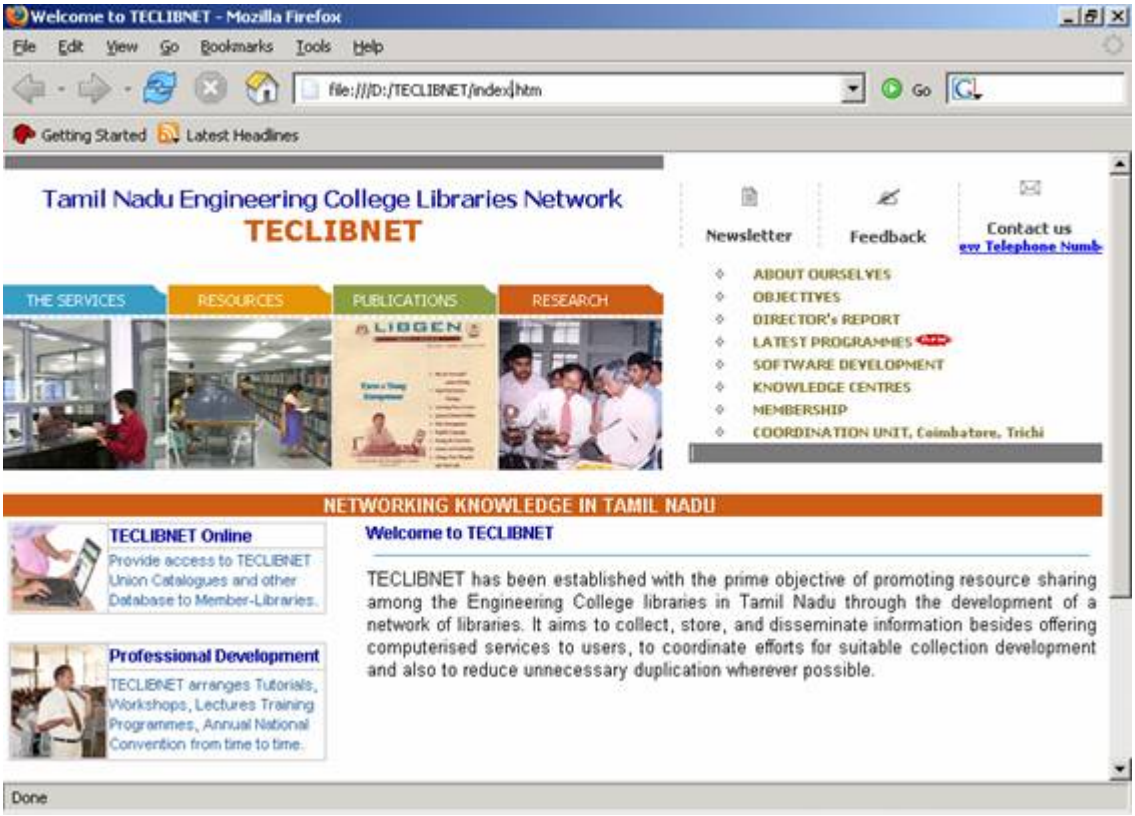
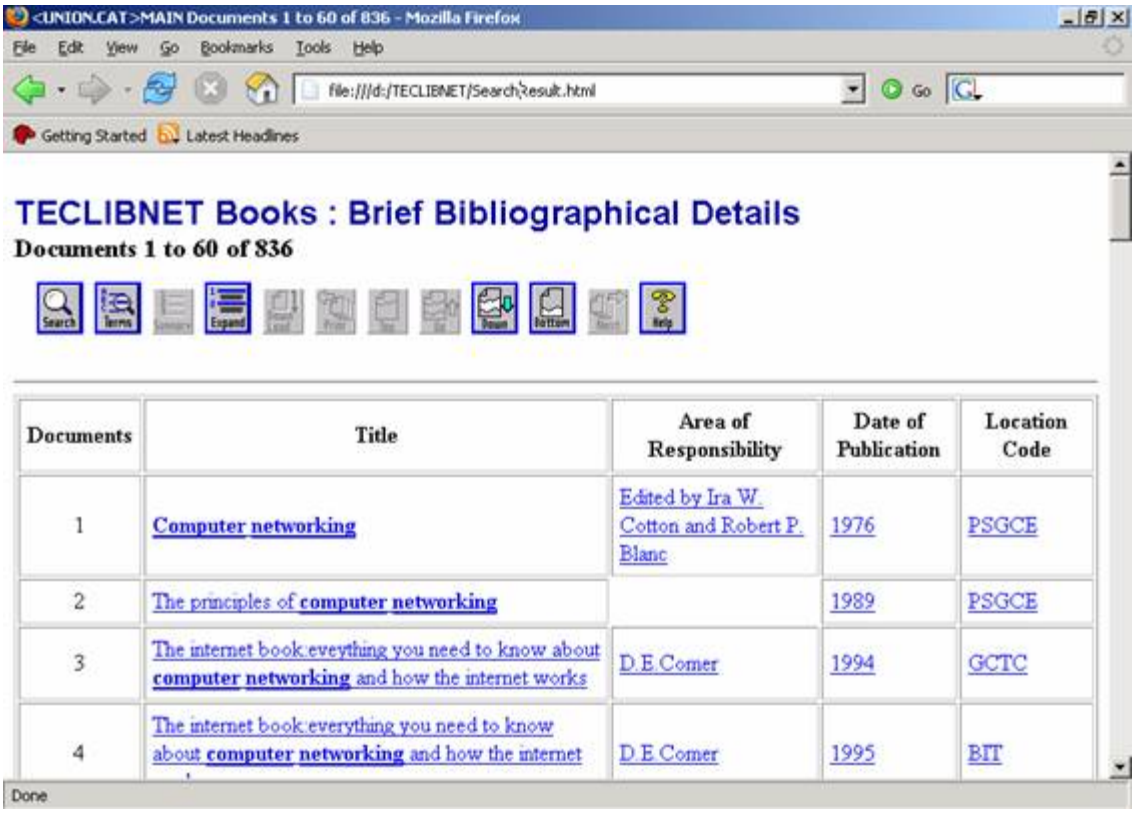


Fig. 3 TECLIBNET Integrated Database

The software used in most of the libraries can display the availability of the document. It is crucial for the library personnel to maintain this integrated database. It could either be a commitment from an exclusive group of people, or it could be done remotely from individual locations.



Documents	Title	Area of Responsibility	Date of Publication	Location Code
1	Computer networking	Edited by Ira W. Cotton and Robert P. Blanc	1976	PSGCE
2	The principles of computer networking		1989	PSGCE
3	The internet book:everything you need to know about computer networking and how the internet works	D.E.Comer	1994	GCTC
4	The internet book:everything you need to know about computer networking and how the internet	D.E.Comer	1995	BIT

Fig.4 TECLIBNET Integrated Database Search Result

Model III

Model III is complicated. The databases would be connected through search-engine architecture. In this way, the search engine can avoid downloading documents and creating network traffic. The search engine's server uses gatherers to create a file of keywords that can be processed into an index for querying by users.

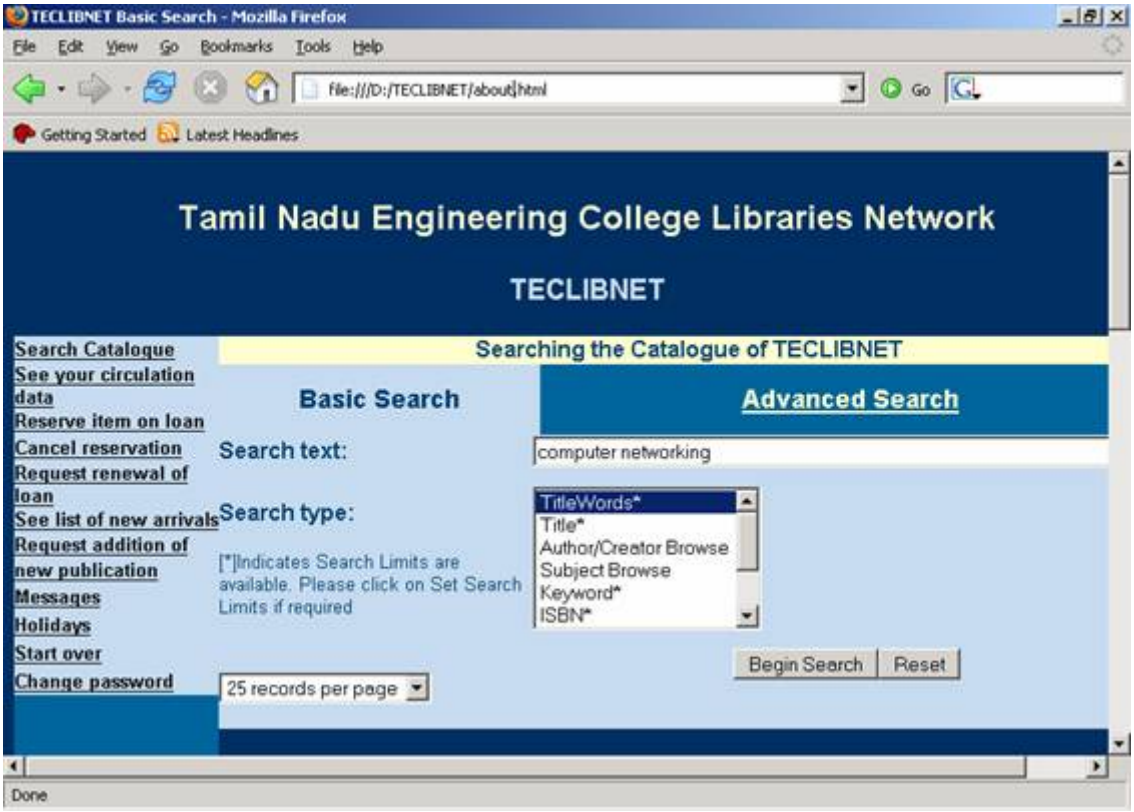


Fig. 5 TECLIBNET Search Engine Architecture

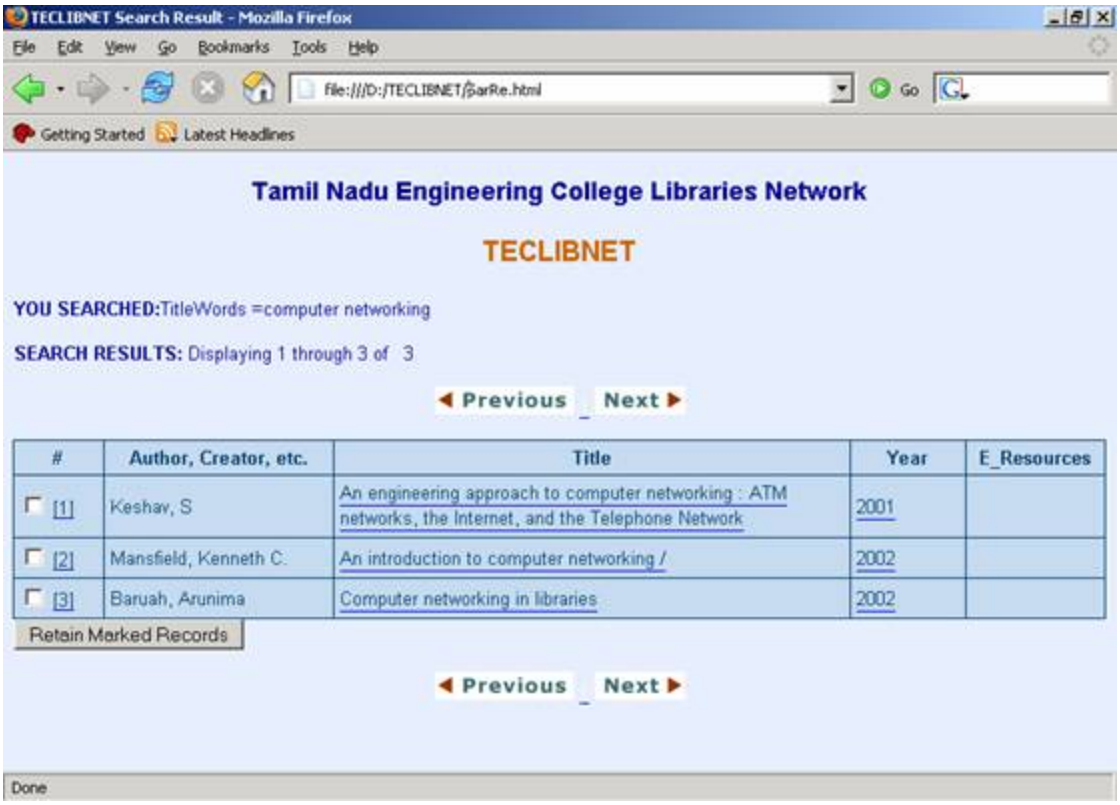


Fig. 6 TECLIBNET Search Engine Architecture Search Result

Conclusion

Resource sharing networks are an important part of the library development plans. While United States and Canada are in a leading position, developing countries are eager to follow them due. Library networks will bring rapid changes and a better future for library and information services. It is absolutely necessary to share resources and pursue a variety of information exchange opportunities with other institutions. Breakthroughs in networking and improvements in the electronic transmission of data make resource sharing viable. Library professionals must be able to make effective contact with relevant people in order to share information, resources, and experience.

It is necessary to establish a library network among all engineering college libraries in Tamil Nadu for maximum use of resources for the benefit of the students, faculty, and research scholars, and to improve the quality of education.

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