Problems in Development and Maintenance of in-house Bibliographic Data Bases

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[The organisation and utility of libraries have changed with time from mere storehouses of interested collection of documents to dynamic service centres, serving all professional and non-professionals in providing useful and need-based collection of documents. As a result of the knowledge explosion and information demand, the libraries have developed and are in the process of development, their own data bases. This paper addresses the basic problems that librarians and information managers faced during the process of generation, development and maintenance of these data bases.]

1. Introduction

Information Technology, a leading technology of present time, has already entered in every field of human activity. The transformation of traditional libraries into sophisticated information centres is also the result of this development. The primary objective of any information centre is to make available the required information within a reasonable period of time. The information thus made available should also be reliable and up-to-date and in a form and format that is convenient to use. The success of any information centre. therefore, lies also in identifying and enlisting the various sources of information and developing the requisite tools and systems for tapping those resources.

2. DATABASES : Their Definition and Classification

Information is knowledge concerning facts, concepts, objects, events, ideas and proecesses, which within a specific context has a particular meaning. When information presented in a structured format is referred to as a database. A database, may therefore be defined as "a collection of records or units of information normally stored in a computer system". On the basis

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of the contents of the databases, these can broadly be classified into the following four categories.

2.1 Full Text Databases

Full Text Databases contain complete text of the documents like books and journals etc in electronic format. As per requirements of the users, the complete text of the desired documents or a particular piece of information can be retrieved from these type of databases.

2.2 Bibliographic and Directory Databases

These are the type of data bases in which bibliogrphic information of various documents or information of diretories are stored in structured format.

2.3 Multimedia

Multimedia contain synchronized digital information (audio and video) on the electronic medium.

2.4 Image Databases

When the images are stored as component of the databases alongwith the information about the stored images are known as image databases.

A data base from the librarians' point of view contains bibliographic citations to the published literature. Data bases usually contain facts and figures, texual and numeric data on the basis of which planners, policy makers and researchers can make better and appropriate decisions, while source data bases contain analysed and synthesised information toilor-made for use be experts in a specific discipline.

Library is a storehouse of knowledge. We facilitate access to this knowledge for users by providing them with various types of catalogues, indexes and other access tools. The computer based information storage and retrieval system is one of the effective tool among them for searching and locating the information.

3. Objectives

The objectives of this paper is to discuss some basic problems that librarians face in the development and

maintenance of in-house bibliographic databases in libraries which do not have adequate human and mechanical resources.

4. Background

Libraries have always adopted newer technologies for fulfilling their basic commitments and mandates, and the adoption of mdern information technology in libraries is a part of this historical process. On the basis of the availability of infrastructure, trained skill, equipment and facilities, the Indian libraries can be classified into the following three categories :

4.1 Developed Libraries

Libraries of various advanced institutions, like, Indian Institute of Science, Bangalore; Tata Institute of Fundamental Research, Mumbai; Bhabha Atomic Research Centre, Mumbai; National Geophysical Research Institute, Hyderabad; INSDOC and DESIDOC, Delhi and some other similar institutions are the examples of developed libraries.

4.2 Developing Libraries

Libraries of those institutions where many facilities, adequate funds, proper tools and skill are not available e.g., libraries of most of the laboratories of CSIR, ICAR, ICMR, DRDO and similar other organsiations.

4.3 Under-developed Libraries

Libraries of those institutions where only minimum facilities, funds, equipments, skill etc are avaialble e.g., Libraries of various colleges, schools and other social and administrative institutions, like Muncipal Boards, Local Courts, etc.

5. Problems

My emphasis on this paper is on the developing libraries which do not have very advanced facilities and infrastructure like the libraries of advanced institutions. They are trying to apply modern information technology for storing, retrieving and dissemination of information avaialble with them, but due to unproportionate human and mechanical resources some basic issues and problem are exist in generation, updating and

maintenance of data bases of their own bibliographic resources. These problems can be categorised into the following four types.

5.1 Hardware Related Problems

The rate of advancement in the hardware and software technolgy and other mechanical and electronic devices is very fast. Bibliographic information retrieval requires large storage and ability to process huge data in a short time. To cope with the challenge of information flood and knowledge explosion in each and every discipline, it is very essential for libraries to acquire latest technolgy in hardware and software and outdated technolgoy should be disposed off or updated. In some of research institutions, it is observed that the technological distribution system of their parent organisations is not proper. They are acquiring latest computer and distributing them according to the rank of their officers. Those officers having higher ranks are entitled to get latest computer systems and their used outdated computers are supplied to libraries and data centres. This type of attitude of the heads of the organisations and policy makers creates a big barrier in implementation of the modern information technology and development of data bases in libraries. In case any librarian is interested in loading any specialised software for any specialised job in the hardware system already available in the library and the capacity of its hard disk does not permit to accept all the files of the software alongwith huge amount of data then it will be of no use to library.

5.2 Man Power Related problems

The skills required from the library staff include acquiriing information, organising it, managing it, storing it, accessing it, retrieving it, and disseminating it in the ever changing technological and social environment. The mere enhancing and adjusting the present skills of traditional library staff may not be enough. Together perhaps it requires total transofrmation of the skills. In most of the libraries in India adequate trained and devoted skill is not avaialble to accept the challenge of adopting

modern technology for the management of bibliogrphic information.

After acquiring and installation of necessary technology in hardware and software, the next stage is data entry. To overcome the problem of man power for data entry job, contracts are being given to professional private agencies or semiskilled staff appointed on daily wage basis. These type of arrangements also create problems in information retrieval because these data entry operators do not have enough knowledge of bibliogrphic details of documents of specialised nature. They some times stored irrelevant information and left the details of much relevancy.

5.3 Problems due to Non-standardisation of Data Elements

To facilitate the methodological and practical construction and operation of library information system, some agencies like UNESCO, IFLA etc have developed certain tools, technique and standards to provide a detailed and structured method for recording mandatory and optional data elements in computer readable bibliographic records for exchange purpose between two or more computer-based systems.

The UNESCO has developed the CCF : The Common Communication Format, as standard format for exchange of bibliographic records between group of libraries and abstracting and indexing services. It specifies all the data elements essential to describe a bibliographic entity - a monograph, a serial, or an article.

Therefore it is very essential for the development and management of any bibliographic databse, that the data should be stored in any standardised format so that it can be exchanged and used by other libraries and made available on local, regional, national and international networks. In India, most of the librries are using CCF for this purpose, some libraries are using their own formats for data entry. Due to non standardisation of data elements, large community of users will

not be benefitted from the information available with these libraries.

5.4 Problems in Data Base Security

In the development and management of data bases when information is being processed for catering to the needs of various users, there is a great need for the information to be safe and secure. But, with prevalence of computer viruses, there is a serious threat to the very existence and usage of computers. A computer virus is "a program that copies itself and can be stored on a hard disk. It can attack on computer's memory in a way similar to that in which a biological virus infects an organism".

Virus protection has become a matter of increasing importance to libraries. As libraries move towards greater PC networking and the use of laptops and remote computing, the chances of system becoming infected with a virus and losing valuable data increase. However, with the avaialble anti-virus software and some precautions, one can prevent virus infection.

6. Conclusion

It is hoped that inspite of several barriers and problems in generation, development and maintenance of databases, the libraries will continue to play a crucial role in collecting, storing, processing, retrieving and disseminating information for the benefit of society and large community for their users.

The information personnel will have to increasingly familiarise with the various programs and machine readable formts. They will also refine their knowledge of vocabularies, query lagnuage and information retrieval techniques.

Keeping in view of the knowledge explosion and information demand, the heads of the organisations and polcy makers may review their policies in providing newer technologies to libraries. The competencies of the staff has to be reviewed and appropriate training programmes need to be identified.

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