

DIGITAL COLLECTION IN INDIA: CHALLENGES FOR THEIR PRESERVATION

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Abstract

The digital age creates new delivery and access alternatives for libraries as well as new preservation challenges. This paper defines Digitization, Digital preservation, types of preservation, what are the factors involved in preservation of and about some of the digital library projects in India.

***Keywords:** Preservation; Digital Preservation; Digital Collection; Information Technology etc.*

1. Introduction

Preservation is the activity of protecting something from loss or danger. Preservation can be done for betterment in improvement, advancement, a change for the better and for progress in development. Preservation is the oldest and most fundamental function of libraries and archives. Traditionally libraries have been responsible for the collection, preservation and provision of information in print format and a specific location. However, over the last few years huge amount of information has been produced digitally and libraries have become major providers of information in digital format. Digital resources are one of the new categories of information resources in the library and information centers. The introduction of digital technology into the process of production distribution and storage of information has made the libraries to go digital.

2. Definition of Digitization

Professor Mike Gerhard defines the Digitization as, 'To translate into a digital form. For example, optical digitize image by translating them into bit maps. It is also possible to digitize sound, video, and any type of movement. (Chad, 1988) A typical

digital library is a media server (group of interlinked work stations) connected to high speed networks. A digital library is an assemblage of digital computing storage and communication machinery together with the content and software needed to produce, emulate and extend the services provided by conventional libraries based on paper and other material means of collecting, cataloguing, finding and disseminating information. A full service digital library must accomplish all essential services of traditional libraries also exploit the well known advantages of digital storage, Searching and communication (Glandney, H.M. et-al, 1994) (Agashe, 2003).

3. Digital Preservation

"Digital Preservation" or "Digital Archiving" essentially aims at taking steps to ensure the longevity of electronic document. It applies to documents that are either "born digital" and stored On-line (or on 248 CD-ROM, diskettes or other physical carriers) or to the products of analog to digital conversional long-terms access is intended. There is a wide range of digital formats available and to make smaller more complicated, different digital object have different Preservation requirements. These

can depend on the reason the record is being preserved, how long it needs to be preserved, the context and history of the record, and its original format. Digital Preservation does not mean the same thing for each digital object. In all cases the record must be preserved so that it retains its integrity and is authentic and usable.

4. Types of Preservation

When considering digital material, there are three types of preservation as follows: The Preservation of the storage medium Tapes, hard drives, and Floppy Discs have a very short life span when considered in terms of obsolescence. The data on them can be refreshed; keeping the bits valid, but refreshing is only effective as long as the media are still current libraries will have to keep moving digital information from storage medium to storage medium. The Preservation and access to content This form of Preservation involves preserving access to the content of documents, regardless of their format. Translate data from one format at another preserving the ability of users to retrieve and display the information content.

Why Digitize and Preserve?

There must be a clarity regarding why libraries want to digitize and preserved material. May be accessibility to other sources/services is a long term solution than investing its own resources which are manpower, machine, money, time etc. Library has to consider the purpose of conversion of its collection in digitized format such as Social cause i.e., providing information free of cost; for making money by marketing; to save duplication of efforts; to help others to create their own products; or to update the product. For whom to digitize and Preserve?

Library has to decide who is the target audience? For example DESIDOC digitizes and maintains a full text database of defense related newspaper clipping which is operational on DRONA (an internet of DRDO) for use of its scientists. News items and editorial from 17 Indian newspapers published in English and Hindi. Languages are covered in this database. Clippings database in updating daily online.

What to digitize and preserve?

Not all the information/documents are needed to be digitized or can be digitized which are available in the library. Selection regarding the right content for right user at the right time in must (Lynch, 249 1994). Librarians and archives have to choose which books, articles, Photographs, films and other materials are to be converted from paper or film into digital form.

How to Digitize and make Access?

Careful studies and experience is required for conversion and preservation of material. The following points are to be considered while digitizing and preservation.

- What equipments are to be used?
- Which Software is needed?
- What Standards are to be followed?
- What is life expectancy of storage media and access media?

As the storage media and access software can become obsolete with time and advancement in storage and communication technology, decisions regarding the longevity and capability of the media is to be taken care of.

How Long to Preserve?

It has to decide the duration of use of the digitized information whether it is for long term or medium term or short-term. The

organization of the content in a digital document must take full advantage of its capabilities and make the search of information for users easier. During conversion it is must to make sure that files are not altered accidentally or intentionally. (Bansal and others, 2005).

5. Digital Library Initiatives in India

In last 3 or 4 years Indian public, academic and research sectors have been witnessing number of digital library initiatives, few of them are listed below:

Million Book Universal Digital Library Project (Million Book Project): The Million Book Project initiated by Carnegie Mellon University, in some countries including China, India, Egypt etc. As on November 2009, around 170,000 books in India and about 440,000 books in China and Egypt have been scanned. Most of the books are available on public domain and for 60,000 (includes 7,000 Indian languages) copyrighted books are being scanned after getting permission for digitization. In India 22 scanning centres are running at different places with 4 nodal centres at different places like Allahabad, Goa, Pune, New Delhi, Hyderabad etc. The Digital Library of ERNET India: The digital library hosted by Education and Research Network (ERNET) is a collaborative effort between various Indian and US institution. It contains technical as well as art and humanities literature in the form of e-books which are searchable or free to read. More than one million books are already digitized and available to access everyone over the Internet. Centre for Development of Advance Computing (C-DAC) Digital Library Projects: C-DAC is known as specialized agency to digitize the rare manuscripts available in India and have

been working on various projects. C-DAC has completed Nagri Pracharni Sabha (NPS), Varanasi digital library project for rare manuscripts and old magazines published during 19th century to 1960 available with NPS. C-DAC is working on digitations of rare documents and manuscripts available with Namgyal 250 Institute of Tibetology, Sikkim. It has also been running project to provide digital library for President's House, New Delhi and to digitize the rare documents or manuscripts available in Uttranchal State. Khuda Bakas Oriental Public Library, Patna has created a digital library of manuscripts available with the library. Traditional Knowledge Digital Library (TKLD) is the collaborative effort of the National Institute of Science Communication and Information Resources (NISCAIR) with Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy (AYUSH). It has already finished digitization of the information on Ayurveda formulations and has been working on Unani and Siddha formulations. Institutional Repositories for research output and Open Access to full text Electronic Theses Database (ETD), a form of digital library, are available at various institutions, research centres and in Universities. Indian Institute of Science, Bangalore; Digital Library of Library and Information Science (DLL) of Documentation and Research and Training Centre (DRTC) Bangalore, Digital Library of Information and Library Network Centre (INFLIBNET), Digital Library at Indian Institute of Management, Kozhikode; Digital Library at National Institute of Technology of Calicut University (Nalanda Digital Library Project) are name of the few.

6. Conclusion

Preservation is the oldest and most fundamental function of libraries and archives. Traditionally libraries have been responsible for the collection preservation and provision of information in print format and at a specific location. However new information technology, computers changed the whole process of creation, access and preservation of information. Over the last few years huge amount of information has been produced digitally and libraries have become major providers of information in digital format. Digital Preservation requires deep knowledge regarding storage media, life expectancy of medium, life type for future use preservation measures ensure that a document digital or otherwise is accessible in a usable form over time. Right information to right user is the key target of information professionals and by establishing digital libraries in their respective libraries can serve the user community in more systematic manner. With the help of Open Source Software like DSpace, GreenStone and E-print etc are boosting the digital library initiatives.

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Digital preservation is a process of preserving both digitised and born-digital contents to a distant future in reusable condition for access by its users. It involves a set of systematic guidelines, processes, strategies, technology and approaches. The technological obsolescence, shorter and uncertain life-period for current storage media, information glut, and Internet revolution are some of the major factors which have made preservation of digital information more complex and challenging. After coming back from Germany, I shared my experience in the form of various lectures delivered at various national and international conferences in India. Since then, digital preservation is prime area of my interest.