

BOOK PRESERVATION IN DIGITAL ENVIRONMENT

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Abstract

“The Introduction of digital technology into the process of production, distribution and storage of information has made the libraries to go digital. Libraries all around the globe have responded to various challenges posed by the preservation of digital information and have encountered the technical, organizational, resource and legal issues associated with it. Although, the libraries have been experimenting with various preservation strategies such as technological preservation, the need for a technologically feasible, financially affordable and widely acceptable strategy for preservation is still there. The paper discusses various issues and challenges associated with digital preservation and examines different strategies for digital preservation. The paper highlights initiatives undertaken at the international level to develop workable approaches and best-practice preservation strategies for digital sources in libraries”

Keywords

Digital, Preservation, Metadata, Storage.

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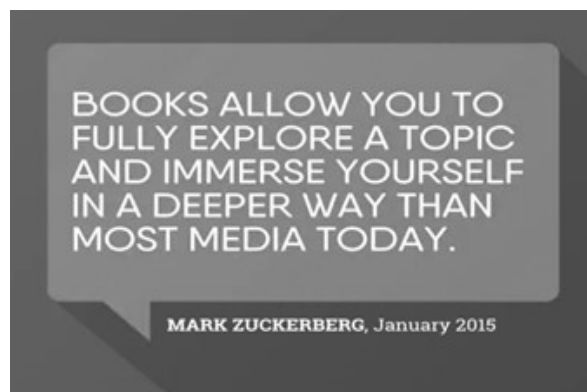
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Introduction

The last decade and a half has produced more records than any previous similar period of human activity. The fact, that the majority of these records are less reliable, retrievable or accessible than ever before, is one of the ironies of the modern information age.”The human past is wonderful and full of wonders. The past is known by records, archives, books and other library materials that constitute documentary sources. There are also various things like monuments, buildings, art objects etc that constitute human heritage. They need Conservation and preservation from time to time. If we do not take care of them on time then they get spoiled. Similarly, the preservation and conservation of the book have to be done, otherwise, after some time the starts tearing and turning yellow. The book is only one time available one person at a time. In this digital book Library works like a boon. So librarians, archivists, curators, chemists and archaeologists the world over are concerned with digital book libraries. Librarians acquire digital materials through different channels that include buying digital content from publishers or aggregators and licensing access to online databases and journals. ICT is one of the major constituents of this diverse change, which is used in storing, disseminating, acquiring and processing of information. Preservation is a part of conservation and restoration. It is concerned with problems like the dusting, cleaning, repair, fumigation, de-acidification, air-conditioning, lamination, binding, and storage of different reading materials like manuscripts, books, films, disks, and optical materials etc.

Digital preservation policies document an organization’s commitment to preserving digital content for future use; specify file formats to be preserved. So, the level of preservation is to be provided and ensures compliance with standards.



Digital Preservation Strategies Involve

Protecting the integrity and identity of data recognizing that it is not practical to try to reserve everything, selecting what material should be preserved

- Managing preservation programs to achieve their goals in cost-effective, timely, holistic, proactive and accountable ways.
- Placing the material in a safe place
- Choosing appropriate means of providing access in the face of technological change
- Controlling material, using structured and other documentation to facilitate access and to support all preservation process

Preservation of Digital Material

Objectives

The main ground of digital preservation is to achieve the following objectives:

1. To provide continued access to digital and digitized material.
2. To ensure the authenticity of preserved digital material.
3. To preserve physical medium to avoid damage/deterioration by an environmental control.
4. To convert the digital information into the latest format, if it is necessary.
5. To obtain coordination of all works that are undertaken for preservation globally in order to achieve more synergy and to avoid redundancy and reduce cost. So It would provide an effective infrastructure for collaboration by connecting different networks, institutions and individuals that are working in this field.

In library and archival science digital preservation is a formal endeavor to ensure that digital information of continuing value remains accessible and usable. It involves planning resources allocation and application of preservation methods and technologies and it combines policies strategies and action to access the reformatted and born-digital content with the challenges of media failure and technological change.

Contents Include

1. A substantial computing and networking infrastructure.
2. Storage and synchronization of files at multiple networks and websites.
3. Regular monitoring and management of files.
4. Implementation and testing of disaster prevention and recovery plans.
5. Periodic review to updating of policies and procedures.



Importance of Digital Preservation

The importance of digital preservation comes from a number of factors associated with the nature of Library Materials. The growth of digital resources in libraries of all kinds summons a new era in their development. Historically, libraries have always been concerned with the management and preservation of ‘atoms’, today they must be increasingly concerned with the preservation of ‘bits’. The conservation of the physical book and journal issue has its own problems, but national libraries and university libraries have copies of books that are centuries old and which, in many cases, have been preserved in pristine condition. The big question of libraries today, however, is how to preserve library materials. Nature of Digital Preservation: Clearly, digital preservation is about more than simply maintaining data.



The View of Digital Preservation so far Discussed Encompasses

- Preservation of data as a stream of bits;
- Preservation of information about the data (usually called metadata);
- Ensuring that data can be found;
- Ensuring that there are workable ways of retrieving and accessing the data; and
- Providing means to re-create or re-present the experience of using the data.

Demanding that preservation managers define the experience that must be re-presented seems to take us far beyond what is expected of the conservator of books or paper records. On the other hand, the best preservation programs have probably taken a similarly holistic approach in dealing with non-digital material.

Significance and Scope of Digital Preservation

Preserving digital content entails far more than making backup copies and storing them in disparate locations. Digital preservation is to extend the usable life of machine-readable files and protect them from media failure, physical loss, and hardware and software obsolescence, these activities include:

- Ensuring the long-term maintenance of a bit stream (the zeros and ones):
- Backing up files and keeping a copy at an offsite location
- Running checks to track the deterioration of storage media, files or bitstreams
Providing continued accessibility of the content
- Viability – making sure that information is intact and readable from the storage media
- Render ability – making sure that information is viewable by humans and able to be processed by computers
- Understandability – making sure that information is able to be interpreted by humans.

Advantages of Digitization

Remote Access: Connect people globally by providing continued free online access.

Multiple Accesses: One of the most important advantages of digitization is multiple access to documents. If a manuscript is in physical format, then it can be handled by only one person in the specific period, but through the digitization process, several users can access the specified document at a time.

Preservation and Conservation: Addressing heritage loss due to environment, ignorance, and destruction.

Dissemination and Promotion: Saving invaluable treasure to enrich the present and enlighten the future.

Dissemination of knowledge and culture via the internet is a 21st-century phenomenon.

Barriers in Digitizing

Initially, no one understood what digitization was, and so everyone was hesitating in submitting his or her manuscript for digitization. There is no doubt that in present times 27 million documents from the government, universities, and personal collection are to be digitized. Initially, they used to send requests to the public to send their manuscripts for digitization but now the scenario has changed; the request is being sent by the public will take approximately ten years to fulfill the requests that are pending. There is a great need to create awareness among the masses about the preservation of the archives so that this heritage can be handed over to the future generation. Digitization requires a huge amount of money.

Digitization faces many problems apart from the technical point of view. Required staff expertise and additional resources are often the greatest costs in digitization. Not only are large budget allocations needed to fund research and intellectual selection, but also time must be spent for feasibility assessments, training, and methodical prioritization of items or collections to be digitized. These requirements pull staff away from their regular workloads. Apart from this digitization faces challenges in several areas like:

- Information retrieval
- Content delivery
- Presentation
- Administrative.
- Storage
- Compression techniques save storage
- User interface
- Classification and Indexing
- Ease of access to a digital collection leads to high expectations of end-users.

Conclusion

Preservation of library material is the most serious problem in today's librarianship. Libraries are more concentrated on the dissemination of information

than the preservation of library materials many libraries are still experimenting with the existing and various other options for access to material provided by electronic means. The future of research and scholarship depends on the ability to preserve digital resources into the future. The preservation and long-term access to digital materials will be an era of concern for libraries and other organizations involved in the preservation of our scholarly land and cultural Heritage well into the new millennium. Although the technical challenges are great, there are a lot of other nontechnical issues that will need to be addressed like: building up a legal framework and bringing out a consensus on widely accepted standards relating to digital preservation. Techniques for organizing and disseminating information are developing fast, but the conservation field is still neglected. If due attention is not given to the conservation of library material, then there is every possibility that our cultural heritage and “nation’s collective” memory may disappear.

Digital preservation in all its aspects is going to require some form of organizational transformation. Long-term preservation of documents is now a hot issue in the present time. Accessioning to the digital documents in twenty hundred Years from now will be out of the question, if people do not process the bit stream underlying digital documents. Digital documents are not fragile. The speed of technological obsolescence makes digital preservation an important issue for everyone. Today, we have acknowledged the canonical needs of digital preservation, and the major libraries and archives of the world are concerned with the abiding digital preservation of traditional information materials and born-digital information for the future generation.

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