

## DIGITAL PRESERVATION IN LIBRARIES: AN OVERVIEW

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### **Abstract :**

*The paper intends to focus on the preservation of digital resources, need of digital preservation, and methods of digital preservation. Without preservation, access becomes impossible and collections will delay and disintegrate. Digital preservation means the planning, resource allocation and application of preservation methods and technologies necessary to ensure that digital information of continuing value remain accessible and usable.*

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### **Introduction :**

In the present era of digital and virtual environment, it has become essential to preserve the treasure of information and knowledge for its sustainable use in future. There are several records, archives, books, and other library materials that constitute important documentary sources. In view of their great importance and relevance it is necessary to preserve them in such a format that has long life. This has led towards the concept of Digital Preservation. For digital preservation of the documents, the first step is digitization. Digitization is the process of converting a hard copy of a printed document into electronic format. By way of this conversion and storing the electronic copy on a server or a medium of central storage, the document can be accessed and viewed by many users at the same time. Usually the digitized materials are made available on Internet for their wider accessibility. The documents and other materials that can be digitized include books, letters, manuscripts, photographs, maps, drawings, etc. The institution having collection of the digitized materials with a facility for the users for their retrieval and access is termed as Digital Library. Digital Preservation provides opportunities facilitating long term storage and access of the digital objects and documents without any limit of time or geographical location. Digital Preservation is a long-term error free storage of digital information. The process is complex because it requires technical skills besides having practical knowledge of ICT, Computer Science, and handling of various digitization equipment.

**Keywords :** Digitisation, preservation, digital material, Digital resources.

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### **Definitions Of Digital Preservation :**

- Kelly (1999), defines digital preservation as “the storage, maintenance, and accessibility of digital object (include any digital material such as a text document, an

image file, a multimedia CD-ROM or a database) over long term, usually as a consequence of applying one or more digital preservation strategies. The term digital preservation is used in different ways.

- Fresco (1999) defines the term as, “the storage, maintenance and access to digital objects over long term”. The key point of this definition is that it is about ensuring that intellectual content, which is already in digital form, remains accessible to the future generations.
- As Marcum noted in 1996, "Preservation is a fundamental responsibility of libraries and archives of record. To be sure, the preservation imperative has been imperfectly carried out in the print environment, but the problem grows even more complicated in the digital world."
- Digital preservation is a process by which data is preserved in the digital format for ensuring the usability, durability and intellectual integrity of the information contained therein. A more precise definition is: the storage, maintenance, and accessibility of a digital object over the long term, usually as a consequence of applying one or more digital preservation strategies. These strategies may include technology preservation, technology emulation or data migration.
- According to ALA (2007), “Digital preservation combines policies, strategies and actions that ensures access to digital content over time

### Need For Digital Preservation :

The digital world is a place of rapid technological and organizational changes, which impacts on the continuing use of digital resources. In contrast to our physical written heritage, still readable today, digital information created only a few years ago is in danger of being lost.

### Materials Need Preservation :

All types of digital resources need preservation including:

- **Born Digital** : Digital resources that have no analogue counterpart
- **Collective resources** : Web sites, e-journals, wikis, catalogue, etc.
- **Communication records** : For example, email, instant messages, etc.
- **Digitally Reformatted** : Digitized versions or surrogates of physical items
- **Data Sets** : Scientific and cultural data comprising multiple individual pieces of data.
- **Individual resources** : Texts, still and moving images sound recordings, etc.

Scanner, digital camera plays vital role to preserve the photos and reading materials in the digital era and without scanner we cannot digitized library

### **Digital Preservation Standards :**

Standards facilitate the access, discovery and sharing of digital resources, as well as their long-term preservation. There are both generic standards applicable to all sectors that can support digital preservation, and industry-specific standards that may need to be adhered to. Long-term access to any type of asset, regardless of format, depends upon institutional commitment and collection care. Sustained access to digital material requires that the preserving institution has the infrastructure, capacity, skills and resources to enable it to keep abreast with the fast moving digital environment. Using standards that are relevant to the digital institutional environment helps with organisational compliance and interoperability between diverse systems within and beyond the sector. But digital preservation is constrained by the absence of established standards, protocols, and proven methods for preserving digital information and by the tendency to consider preservation issues only at the end of a project or after a sensational loss. Levy and Marshall (1995) observed that "With few exceptions, digital library research has focused on architectures and systems for information organization, retrieval, presentation, and visualization, and on the administration of intellectual property rights"

### **Strategies Of Digital Preservation :**

The aim of the strategy is to build upon the existing digital preservation work to continue to enable the long-term sustainability of digital assets, both born digital and digitised, held by the Library. Lyman and Besser noted, "The long term preservation of information in digital form requires not only technical solutions and new organizational strategies, but also the building of a new culture that values and supports the survival of bits over time." Beagrie, Semple, Williams, and Wright reinforced the idea that "...any long-term access and future benefit may be heavily dependent on digital preservation strategies being in place and underpinned by relevant policy and procedures...and that digital preservation policy should be integrated into business drivers, activities and functions e.g. regulatory compliance, staff development, applied technology, academic excellence." At the moment, primarily migration and emulation may be identified as relevant digital preservation strategies. Refreshing has to be rated as a supplementing strategy. The approach to set up a "hardware museum" seems to be hardly suitable to provide a long-term perspective or strategy for digital preservation.

### **Benefits Of Digital Preservation :**

- It allows data to be used by future generations
- It maintains an uninterrupted chain of evidence in research data
- It facilitates the reuse of library materials
- It is a long-term approach

- It assists with legal record retention obligations
- It enhances opportunities for competence development and lowers the human factor.

### Disadvantages of digital preservation :

The following are a few drawbacks with digitalization preservation:

- The copyright system.
- The information is accessed at a very rapid speed.
- Digitizing a library comes at a very significant cost.
- High bandwidth is needed for digital libraries to transfer multimedia content, yet this capacity is getting smaller every day. People like to read printed literature, but digital libraries are unable to offer a traditional setting.

### Challenges For Preserving Digital Contents :

- **Financial Constraints** : Limited budgets make it difficult to procure high-quality scanners, servers, and preservation software.
- **Technical Expertise** : Many college libraries lack trained staff with skills in digitization, metadata creation and digital curation.
- **Infrastructure Issues** : Inadequate internet connectivity, storage facilities and reliable power supply hinder smooth digital preservation.
- **Obsolescence of Technology** : Hardware and software used for digitization may become outdated quickly requiring regular upgrades.
- **Copyright and Legal Issues** : Digitizing copyrighted books, theses and manuscripts requires permissions which can delay projects.
- **Data Security Risks** : Threats such as hacking, file corruption, or accidental deletion can endanger digital archives.
- **Sustainability** : Maintaining digital repositories over the long term requires consistent funding and policy support.

### Role Of Librarians In Digital Preservation :

Librarians play a central role in driving digital preservation within their institutions. Their responsibilities include:

- Identifying preservation priorities based on collection and user needs. u Advocating for funding and institutional support.
- Designing and maintaining preservation workflows.
- Educating users and staff on digital stewardship.
- Collaborating with IT departments, archivists, and external partners.

With the right training and institutional backing, librarians can become powerful digital preservation leaders, safeguarding knowledge for future generations.

## Conclusion :

Digital preservation in one such initiative, the library has to take up responding to the growing use and adaptability of information technology to library related activities. Digital Preservation can, therefore, be seen as the set of process and activities that ensure the continued access to information and all kinds of records. A commitment to preserving digital information requires a legal environment that enables preservation. It also means that organization must take responsibility for preservation by erecting new policies and creating the economic means to secure survival of this generation 's knowledge into the future.

Information has become the fourth basic need of our life and our country cannot be too lagging behind from the changing if information world. The libraries are responsible to collect, disseminate and preserve the printed heritage of our country.

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