

Digital Preservation of Information Resources: Problems and Prospects

Ramnghahmawia*

College Librarian, Government Saitual College, Mizoram

Abstract – Due to technological invasion digital preservation has become the important process in information society to have the long term access of information and to keep it for the future generations for their use. This paper discusses the meaning, importance, objective and strategy of digital preservation and highlights various aspects of digital preservation.

Keywords: Digital Preservation, Information Technology, Library, Challenges, Strategy.

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INTRODUCTION

Human being needs information and seeks from different sources and in different ways to undertake variety of responsibilities and tasks. They also need and seek information to achieve goals and objective in every way of life like education, economy, politics, social activities, etc. Now we live in "the information society". In this information age or society, Information is one of the most important factors of life without which one can do nothing at all. As such information has been described as fifth need of human being after air, water, food and shelter. Everyone needs information about everything in his daily life. Library is said to be a social institution charge with the function of preserving and disseminating information that facilitates research and development in human culture and civilization. Access to existing knowledge and information is essential for research. Supporting research is yet another important role of a library The newly created knowledge is mainly transmitted in paper and digital format via newspaper media, research reports and other similar publications.

In this digital era, Library and Information Centers are moving to acquire, maintain and provide resources in digital format or digitized existing non – digital Resources. So, Digital preservation is therefore a global problem of information management. Now a day, information technology brings a unique opportunity to the field of preservation of digital resources as well as non-digital to digital documents.

WHAT IS PRESERVATION?:

Preservation activities relate to the maintenance of information resources to be used either in its original

form or in some form other usable way i.e. digital form. According to Srivastava & Kumar, the preservation and conservation are the process of keeping an object safe from harm or loss, damage, destruction or decay and Maintain it for present and future use in a reasonably sound condition. Preservation addresses the regular aspects of maintenance.

DIGITAL PRESERVATION:

Digital preservation refers to a management series necessary for the continuous access of digital materials as soon as they are available are needed. The main goal of digital preservation is to make the intellectual content to remain intact as long as possible It is widely regarded as requiring more constant and continuous attention than preserving other materials. Digital conservation is the set of processes and activities that guarantee the continuous access to information and records of all kinds. Scientific and cultural heritage existing in digital formats. This could include the conservation of digital reformatting materials, in particular data that is digital and has no analogue counterpart. The purpose of digital preservation is to take steps to ensure electronic document longevity. It applies to digital born and stored online documents, floppies, or other physical carriers, and long-term access and destination for the products of analogue to digital conversions.

The words or phrase digital preservation creates confusion since readers, families with traditional approaches, assume that preservation involves the use of well-defined techniques to prevent the original artifact deteriorating further and perhaps even improve it to the point where it can be used again. It includes different methods, capabilities

and results and can complement traditional conservation services while offering unique and dynamic new uses simultaneously of information.

TYPES OF DIGITAL PRESERVATIONS:

Digital preservation covers data preservation – printing and non-printing, in digital form, for effective, reliable and meaningful use. It can be categorized as–

- (a) Long-term preservation: continuous access, or at least indefinitely access to, digital materials.
- (b) Medium-term preservation: continuing access to digital resources for a specified period of time, but just not surely beyond technological changes.
- (c) Short-term preservation: connectivity to digital materials during predicted use, for a defined period of time, but not beyond predictable future conditions. and until it becomes inaccessible because of changes in technology.

NEED OF DIGITAL PRESERVATION:

Preservation of the information resources is one of the most important works of a library as according to fifth Law of Library Science, "Library is a growing Organism". Library users constantly acquire, collect, organise and promote all kinds of material. Therefore, ever more users have to access such components. As a greater number of users use them, they are more likely to be damaged library must adopt a range of appropriate management strategies to prevent such deteriorating materials that can influence further retrieval of the contents. so that the users can access it for long-long time to fulfill their information needs.

The forms of media on which digital content is stored are much more susceptible than analogue media such as paper to deterioration and catastrophic loss. The long-term access to data is another challenge. Digital technology is rapidly trying to develop and recovery and playback technology can become obsolete over the years. If a software or decoding technology is dropped or a hardware device is out of production, record building with such technologies is at high risk of loss, because they are no longer accessible. Digital preservation work is necessary for making usable in future. This challenge of unwanted happen in the digital record can be broke out due to lack of standards, protocols and proven method for preserving digital information resources.

The digital technology offers several advantages over their print counterpart, it along with other associated internet and web technologies are in a continuous flux of changes. New standard and

protocols are defined on a regular basis for file formats, compression technologies, hardware components, network interfaces, storage media Digital content and devices etc. face the risk of material of techno decrepitude and transient standards. Magnetic and optical discs as a physical media are being re-engineered continuously to store more and more data. Products, including software, hardware and related standards and protocols that have been used in the past, are continually at risk of backward compatibility. The difficulties of maintaining access to digital overtime are linked to significant differences between digital and paper-based materials.

OBJECTIVES OF DIGITAL PRESERVATION:

The mission of digital preservation is to overcome the obsolescence threats that digital material is facing on the bit stream, logical and semantic level and the sustained accurate, long-term access for specific user communities to digital objects.

- To Protect Originals: General application of digital technologies in an archive or library is digital copies that can be used for ready reference instead of causal browsing through the original sources. Physical accesses to the original documents are limited, so objective of preservation are met.
- To Present Originals: To present the detailed information content of the original sources, a digital system could be built for which that system can be used to fulfill most of the research and learning potential of the original documents.
- To Transcend originals: Digital photography holds the promise of producing products for use in very small but increasing numbers of applications. that are impossible to achieve with the original source.

BENEFITS OF DIGITAL PRESERVATION:

Digital preservation of information resources is meant for upkeep of materials for future use. Only if the resources are in good condition is the correct dissemination of library materials possible. This requires the correct preservation of the materials.

- Digital preservation helps preserve uncommon and fragile objects without trying to deny access to students.
- Once materials are converted to digital, users can retrieve them in seconds by searching for words, combination of words, or store on a computer or take

prints. Several users can simultaneously read the same information or view the same picture.

- Electronic copies of space occupy millimeters instead of meters of racks and prevent space problems.

PROBLEMS AND PROSPECTS OF DIGITAL PRESERVATION:

Many libraries and archival materials have begun or are in the process of beginning major digital preservation initiatives [LSDIs]. LSDI's main players are cultural institutions, businesses such as Google and Microsoft, and non-profit organizations such as the accessible product coalition.

Access, Preservation and Development of Research is the major reasons for library participation in LSDIs.

Digital preservation is hoped that library material will remain available to generations to come. Libraries are responsible for their materials and for their commitment to digital archiving. Libraries intend to use digitized copies as work backups in the event that they are printed out, deteriorated, lost or damaged.

The aim of digital preservation is to protect the material of the documents – for access for coming future generations. The change over from acid to alkaline, paper and from letter-printing to offset printing and from printing to digitization have brought a major change in the preservation of methods of the libraries. Now, a large quantity of information publishes as e-books, e-journals or uploads to internet for worldwide use. In spite of the merits of digital information these are still problems of deterioration of digital media because of technological obsolescence for every 2 to 3 years. For which the digital technologists all over the world are working hard so that there will be a permanent solution for digital preservation.

An increase in the use of libraries today is brought by current multiple information source facilities in the libraries. The information seekers are pouring into libraries because they need information sources like books, journals and want to see the facilities of the digital era. Senior citizens have difficulty with digitization, they don't have the confidence of opening the website. Therefore, librarians of today need to help their people with what is at their fingertips, so that the users may have confidence that digitization is nothing else but the quickening process of the earlier services of the libraries. Youths have a wrong perception that everything is available at internet without judging the sources. They need to consult a librarian for authenticity of the sources. Most reference books today are online but costly. But these things are available in libraries without cost. Open access may be the future of digital era, but till

now librarians are acting as open source of information and gateway to knowledge.

CONCLUSION:

Digital Preservation requires a long-term strategy and appropriate technology adoption. The twenty first century is still confronting with the problem of universally accepted technology for preserving out digital heritage but institutions world over are seeking with the best paths to long-term preservation of digital resources.

In the information era, information has become the 4th basic need of our life and our country cannot be too lagging behind from the changing in information world. The libraries are responsible to collect, disseminate and preserve the printed heritage of our country. In a single initiative of this nature, digital preservation requires the library to respond to the increasing use and adaptability of information technology to related library activities. Digital preservation and preservation. This is why the set of processes and activities ensures continuous access to information and records of all kinds is considered. In spite of so many advantages of information digitization, these are still some problems of digital preservation like, electric failure, human failure, media failure, deterioration and rapid changes in technology that make older systems obsolete. Short life of digital storage device and unpredictable deterioration of storage media remains a problem for digital preservation.

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Corresponding Author

Ramnghahmawia*

College Librarian, Government Saitual College,
Mizoram