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Role of Digital Preservation in Libraries

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Abstract: *The digital preservation ever since the first computer was introduced and its products and services found its way into the libraries. It is primary duty of library to organise its materials in the manner that is useful for those who use it and store its collection for future use thus preservation and conservation of library materials are essential for library organisation. It is an important aspect of library and information management. This article deals with digital preservation by using information technological tools. This article states about different methods of digital preservation. We can prevent environmental factors that can affect the library materials by using digital preservation. The main object of preservation and conservation is to use or access the library materials in future also. With the help of digitisation methods we can preserve library materials in better ways.*

Keywords: digital preservation

I. INTRODUCTION

The digital preservation ever since the first computer was introduced and its products and services found its way into the libraries. The libraries have been migrating and refreshing their OPAC records ever since automation in libraries started. Since mid-1980s, the libraries in India also started building their in-house databases and began subscribing electronic resources such as Current Contents on Disc (CCOD) as well as other computer-based services that were delivered on 5¼ inch floppy discs. Several books in 1980s and 1990s had accompanied floppy discs. 5¼ inch floppies are already obsolete and floppy drives that were used for reading them have completely disappeared. CD ROMs, once respected for its longitivity, are known to dysfunction much faster than expected. Moreover, in time to come, the CD ROM may completely be phased out in favour of its more evolved avatar, i.e. DVD ROM with greater storage capacity. Institutions such as national archives, data archives, and other cultural institutions with preservation as one of their main mandate, have established digital preservation programmes way back in late 1960s. These programmes addressed the issues of preservation of technology and digital contents that existed at that time (paper tapes, punch cards, etc).

Definition:

1. The term “digital preservation” refers to preservation of materials that are created originally in digital form and never existed in print or analogue form (also called “borndigital”) as well as those converted from legacy documents and artefacts (printed documents, pictures, photographs or physical objects) into images using scanners, digital cameras, or other imaging technologies for access and preservation purposes.
2. Digital preservation refers to a series of managed activities designed to ensure continuing access to all kinds of records in digital formats for as long as necessary and to protect them from media failure, physical loss and obsolescence (Cornell University Library, 2005). The Wikipedia (Wikipedia, 2006) defines digital preservation “as long-term, errorfree storage of digital information, with means for retrieval and interpretation, for all the time span that the information is required for”, where “retrieval” means obtaining required digital files from the long-term, error-free digital storage, without corrupting the errorfree stored digital files and “interpretation” means that the retrieved digital files, which may be texts, charts, images or sounds, are decoded and transformed into usable representations for access to human.
3. Digital Preservation Coalition (2006) defines digital preservation as “all activities that are required to maintain access to digital materials beyond the limits of media failure or technological change. Those materials may be digital records created during the day-today business of an organisation, i.e. “born-digital” materials created for a specific purpose (e.g. teaching resources), or the products of digitisation projects”

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Need for Preservation & Conservation Library Collection:

Need for Preservation & Conservation Library collection generally contains a wide range of organic accoutrements, including paper, cloth, beast skin, and bonds, and ultramodern media similar as microforms, optic and glamorous discs, digital formats, photos, and audio and visual media. The organic substances suffer a continual and ineluctable natural aging process. While measures can be taken to decelerate this deterioration by careful running and furnishing a sympathetic terrain, it's insolvable to halt it altogether. The chemical and physical stability of library material also depends on the quality and processing of the raw products used in their manufacture together with the design and construction of the final artefact. Over the centuries, the pressures of mass product have reduced the material quality of what's entered in libraries. important of the paper stock manufactured after 1850 is largely acidic, becomes brittle, and will tone- destruct in time. List ways have been shortened for the sake of robotization and numerous textbook- blocks are now held together solely by glue. In fact, all books and, in particular, leather tapes, are far more susceptible to damage. Though these documents have essential preservation problems they need to be stored and used precisely if they aren't to corrupt precociously. therefore, two major problems defy a librarian seeking apre-1900 book are continuity and failure. A book published from themid-1800s on is presumably made of acid paper, bound in a machine- made case and veritably fragile.

Preservation of information is an idea whose time has come. Preservation and conservation(PAC) are related conditioning, applicable in library and information centers (LICs). still, they were supposed to be the fiefdom of those who had the care of rare books and calligraphies, if considered at all. But during recent history, the view of PAC has expanded to come an integral part of the important wider area of collection operation and a vital element in the provision of access toinformation.However, which records the information, has been allowed to decay and vanish, If the particular medium. This increased perception of the essential demand of preservation is maybe related to the 'green revolution' generally, global warming, pollution and the burning of fossil energies. The World Environment Summits at Rio in 1992 and Kyoto in 1997 and multitudinous other events have all contributed to the growing mindfulness of the significance of conserving and conserving the physical terrain; some of this concern has oozed into the thinking of library and information directors(LIMs) who are concerned with access to information and its provision to their druggies.

Preservation can only be successfully managed if it's perceived as a core task throughout the institution and if preservation experts are committed in all conditioning, including digitization enterprise accepted in the name of access. It's of consummate significance that the preservation field keeps up the dialogue about the preservation of every action. They can bring a perspective of durability to the discussion and make it clear that there's further to pierce than documents and images into tiffs and terabytes(LUSEN ET, 1999).(48)

Techniques Used for Digital Preservation of Library Materials:

library is a depository of knowledge and a social institution ladened with the responsibility of propagating knowledge to the people without any demarcation. Information collections are the priceless heritage of humanity as they save data, ideas, studies, accomplishments and substantiation of mortal development in manifold areas, periods and directions. Conserving intellectual and artistic heritage becomes not only the academic commitment but also the moral responsibility of librarians, who are in charge since proper dispersion of library accoutrements is only possible when the documents are in good and usable condition. Preservation of deteriorating information accoutrements in libraries has come a global miracle to which libraries must aggressively respond if the charge of meeting the information requirements of their patrons would be attainable in this period of abating popular allocation to libraries.

Some of the ways used to save rare accoutrements are

A. Film Based Media

There are three main types of photographic materials, viz. cellulose nitrate, cellulose acetate and polyester. These materials have been used as support material for making of transparencies, motion pictures, microfilms and other photographic products. Cellulose nitrate and cellulose acetate are unstable. Even at room temperature, these chemicals slowly decompose emitting gases in the process. Cellulose nitrate becomes highly inflammable especially in deteriorated condition.

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B. Microfilming:

Microfilming typically involves producing a roll film master, indeed if the final interpretation of the book will be on fiche. Microfiche isn't considered a preservation format but can be produced from preservation roll film as an access medium. Microfiche can give arbitrary access to a particular frame briskly than roll film, and microfiche reading machines are cheaper than microfilm reading machines.

Microfiche has accepted a medium of choice for a microform book roster. still, numerous compendiums dislike both microfilm and microfiche.

C. Digital imagery:

In digital imagery books is scrutinized into computer storehouse, which is a promising volition process. Storing runner images of books permits the rapid-fire transfer of books from library to library. The images can be displayed or published, much as film images, although with lesser cost moment. also, digital imagery permits considerable reclaiming adaptation of discrepancy, adaptation of image size, and so on. Handling of these images requires special chops and outfit many libraries retain, but there's rapid-fire technological progress in the design of fragment drives, displays, and printing bias.

D. ASCII (non-image):

ASCII storehouse is much further compact; a runner of textbook that will use a many hundred Kbytes in image form will contain only one to two thousand bytes of ASCII, or 11100th of the space. Other advantages of ASCII storehouse include the capability to reformat and manufacture whole or partial documents fluently; the capability to prize citations or other subsections of the documents and include them in newer papers; and the capability to mechanically compare textbooks. Editing textbooks for latterly publication also needs ASCII rather than image storehouse. further operations similar as feeding the textbooks to speech synthesizers to be read audibly are also possible; ASCII textbook can also be displayed on a wider variety of outfit and on cheaper outfit. ASCII displays can be formatted for the particular screen size or program terrain preferred by the stoner. The image quality shown doesn't reflect any fading or abrasion of the original.

E. Magnetic Media

Magnetic tapes, including audio and video recordings on cassettes, audio and computer reel-to-reel tapes, computer diskettes, etc. are most commonly made of a magnetic layer of chromium or iron oxide bound with an adhesive onto a polyester film base. It is adhesive binder which is susceptible to deterioration through hydrolysis and oxidation. As information stored on magnetic tape is in patterns formed by magnetized particles, any loss or disarrangement of magnetic oxide causes loss of information.

F. Optical Media

CD-ROM (Compact Disk Read only Memory), DVD (Digital Video Disk), etc. may contain audio, computer, and video/picture data. The molded plastic computer disk incorporates a continuous spiral of pits which contains the data. An aluminum reflective layer allows a laser in the computer disk drive to read the encoded information. Data integrity is protected by a lacquer coating on one side and a plastic substance on the other side. Forcefully bending the disk and touching the disk surface with any sharp object damages the disk and results in loss of data.

II. CONCLUSION

The digital preservation ever since the first computer was introduced and its products and services found its way into the libraries. It is primary duty of library to organise its materials in the manner that is useful for those who use it and store its collection for future use thus preservation and conservation of library materials are essential for library organisation. It is an important aspect of library and information management. This article deals with digital preservation by using information technological tools. This article states about different methods of digital preservation. We can prevent environmental factors that can affect the library materials by using digital preservation. The main

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