Chapter 2
Digital Information Management: Preserving Tomorrow’s Memory

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ABSTRACT
The most burning issue of today’s electronic generation, where information generation is a task of seconds, is to save the information in a form that could successfully be read tomorrow. It is easily understandable that if one keeps a book in a drawer and open it after 10 years, one may hope to get it back and read it, possibly with some damage, but this is not the case for information stored in a Compact Disc (CD) or any other electronic device. This chapter projects at understanding digital preservation issues and identifying appropriate solutions to manage digital information. This chapter also aims to identify the projects undergoing throughout the world for digital preservation. This chapter overall discusses the speedy obsolescence, short-lived technologies, and other issues in digital preservation with the identified and possible strategies of digital preservation.

INTRODUCTION
The year is 2045, and my grandchildren (as yet unborn) are exploring the attic of my house (as yet unbought). They find a letter dated 1995 and a CD-ROM (compact disk). The letter claims that the disk contains a document that provides the key to obtaining my fortune (as yet unearned). My grandchildren are understandably excited, but they have never seen a CD before—except in old movies—and even if they can somehow find a suitable disk drive, how will they run the software necessary to interpret the information on the disk? How can they read my obsolete digital document? - Jeff Rothenberg, 1999

In recent few decades libraries are more recognized for their services of information dissemination in anticipation and on demand. This recognition has put libraries out of the reputation as a store house and custodian of documents. But it must not be forgotten that preservation is always necessary for a library and it is one of the major duties. Preservation is important not only for present but for the
future as well. A library collection may include books, journals, original manuscripts, audio sound recordings, videos, and digital collections.

‘Preservation’ or ‘archiving’ or to say ‘permanent availability’ of the documents is one of the processes which has been dramatically affected with the advent and highly acceptance of the digital world. When once the printed text was the only medium of information and was preserved successfully by the libraries at different location of the world. But, today preservation is not that much easy and carries a number of questions; first space of the preservation, as, it may always change with the links hyperlinks; assurance that the document will be preserved for long and will be available as and when required; and most importantly the preservation will take place keeping continuous track of the technological changes so that the document format does not become obsolete and could be read anytime.

Today, digital world has developed to an unavoidable extent and doing so it carries a number of advantages such as space, cost, and paper. At the same time this developments and advantages pose new challenges to all segments of the society including a layman, author, publisher, and library. A layman who was having a camera with negatives few years back now holds a digital camera similarly where one was keeping a diary to note phone no. and other important information, now s/he keeps mobiles, tablet and other technology to record those information. An author who uses to write his or her ideas on papers with pen or typewriter now uses a computer to store his/ideas. Publishers are turning their business from print to digital or developing new business model for electronic publishing. Moreover, the role of libraries is changed dramatically in the digital environment. They have to reshape and reconstruct their roles and policies as information disseminator and information preserver. Thus, all these segments of the society need new skills, tools and arrangements for the management and preservation of new digital information.

**DIGITAL INFORMATION: WHAT AND WHY**

Digital information is an invisible form of Information which requires some hardware and software to convert into visible information. An information is termed as digital information when, in order to secure the literature, we convert the printed text, images and other literature into machine readable format that can be stored onto a hard drive, DC, DVD or other optical and storage devices. Additionally, digital information can also be ‘born digital’ information where no other format of the same literature is available. National Library of Australia (2003) has defined digital information as

*Digital materials include texts, databases, still and moving images, audio, graphics, software, and Web pages, among a wide and growing range of formats. They are frequently ephemeral, and require purposeful production, maintenance and management to be retained.*

The digital information has following characteristics

1. **Dependency:** Digital information is always dependent. It requires some hardware and software to be read. Without these software and hardware digital information is useless as it cannot be read.
2. **Multipliable:** Digital information is multipliable. One can create a number of copies of information in digital format in very short time.
3. **Dynamic:** Digital information can be altered with user interaction. The user can not only alter the face of digital information but also the format of it using proper hardware and software.
4. **Economic:** Digital information is very economic in nature. Once it is produced it can be multiplied in as much copies as needed.