USE OF MULTIMEDIA TECHNOLOGY IN LIBRARIES

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Umrav Singh
Govt. P.G. College Sendhwa, Barwani
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USE OF MULTIMEDIA TECHNOLOGY IN LIBRARIES

Umrav Singh
MPhil. Student
Department of Library & Information Science
Davv University, Indore(M.P)
umravsingh2@gmail.com

ABSTRACT

The development of information technology (IT) is enormous of global in its magnitude; pervasiveness and usefulness because of its most distinguish features of dramatic decrease in cost, size and tremendous increase in processing speed storage and communication capabilities. The conventional libraries confined within a physical space are slowly transforming into digital information resources centers and effective library services. However, just the availability of power of information technology and digital contents is not enough to effectively deliver the digital and multimedia technology content unless the content forming part of the library resources is properly designed.

This article gives brief introduction about the use of multimedia technology in libraries, library services, characteristics, current technology trends using various types of digital object formats, tools for creating these objects' with their merits and demerits and the popular tools for digital content.

INTRODUCTION

Multimedia technology is one of the components of information technology that is also being used in libraries and information science or centers in the handling and dissemination of information. It has affected all fields of the human life.[1] Broadly speaking information technology deals with the information systems, data, storage, access, retrieval, analysis and is intelligent decision making for enhancing organizational effectiveness. Developments in computers and information technology have brought out new dimension to the programme of information handling and use. Technological development have given rise the new ideas relating to collection, processing and dissemination of information. These developments and ideas including use of multi-media technology. Multimedia technology is a combination of several forms. The form of information could be text, audio, visual graphics, image, audio or video etc. Advancement of information technology, multi-media systems plays a more important role and put an impact on our lives. From home entertainment, through training, education, medicine and health services and financial services to business communication, multimedia plays an important role.[2]

MEANING OF MULTIMEDIA

The term 'Multimedia' was coined by Bobb Goldstein to promote the July 1966 opening of his "Light Works at L'Oursin" show at Southampton Long Island. On August 10, 1966, Richard Albarino of Variety borrowed the terminology, reporting: "Brainchild of song scribe-comic Bobb Goldstein the 'Light Works' is the latest multimedia music-cum visuals to debut as discotheque fare.[3] Two years later, in 1968, the term "Multimedia" was re-appropriated to describe the work of a political consultant, David Sawyer, the husband of Iris Sawyer-one of Goldstein's producers at L'Oursin.

In the intervening forty years, the word has taken on different meanings. In the late 1970s the term was used to describe presentations consisting of multi-projector slide shows timed to an audio track. However, by the 1990s 'multimedia' took on its current meaning. The German language usage society, Gesellschaft fur deutsche Sprachgebrauch, decided to recognize the word's significance and ubiquitous ness in the 1990s by awarding it the title of 'Word of the Year' in 1995. The institute summed up its rationale by stating "[Multimedia] has become a central word in the wonderful new media world"

In common usage, the term multimedia refers to an electronically delivered combination of media including video, still images, audio, text in such a way that can be accessed interactively. Much of the content on the web today falls within this definition as understood by millions. Some computers which were marketed in the 1990s were called "multimedia" computers because they incorporated a CD-ROM drive, which allowed for the delivery of several hundred megabytes of video, picture, and audio data. [4]

Multimedia is media that uses multiple forms of information content and information processing (e.g. text, audio, graphics, animation, and video, interactivity) to inform or entertain the (user) audience.

Multimedia the plural of medium. The term multi-media are formed by the combination of two terms multi and medium. Multi means more than two and media is the plural form of medium that refers storage, transmission, communication, representation, presentation, input interaction and perception, which means that it refers to different levels of abstractions. The word multimedia is used exclusively to describe multiple forms of media. The word multimedia simply means being able to communicate in more than on way. We can communicate verbally and visually. Computer can communicate in several ways too. Multimedia are unique development in the field of Information Technology (IT).

Multimedia means digital information involving text, picture and video stored in a computer system where these can be manipulated and redressed.

Multimedia is a combination of some or all forms such as text, data, images, photographs, animation, audio and video, which are converted from different formats into a uniformat digital media and is delivered by computers. Unlike the analogue media, the digital media which allows users to manipulate according to the needs. Use at their pace, and internet at any point of the programme when a multi-media programme is developed in a hypertext environment, the resulting product is called 'hypermedia'. [5]

DEFINITION OF MULTIMEDIA

The term multimedia is being used as general in information industry. Hypermedia is its synonym term. Multimedia cannot be defined rightly. Even then some scholars of the subject had tried to define it in different ways. Definitions given by them are being below. [6]

1. *According to Hoffos, "A presentation stored in text data, audio, computer graphics, still photos, animation, moving footage (film or video).* [7]
2. *According to Oxford English Dictionary, "A medium is an intervening substance through which impressions are conveyed to senses".* [8]

THE MULTIMEDIA COMPUTER SYSTEM

The essential capability of any multi-media computer system is the ability to converts the analogue signal to a digital format and compresses this information using standard algorithms. The power of the CPU determines whether this process can be carried out in real-time or whether it has to be done off-line. The compression process is necessary otherwise the quantity of data to be stored and transmitted would be excessive. It is now possible to digitize video with desktop computers such as the PC or Macintosh, which makes possible the handling of multimedia material which can be used in support of teaching.

A multimedia computer system thus comprises of a powerful high speed central processor, relatively large memory, hard disk and floppy disk drives, CD-ROM, audio input and output devices, e.g. microphones and loudspeakers, video input and output devices, e.g. VCRs and video-cameras, still image input and output device, e.g. scanner, high graphics capability to handle both bitmap and vector graphics such as SVGA/XSVGA quality display and mouse.

COMPONENTS OF MULTIMEDIA

One or more of the following media and / or their combination form part of any Multimedia application.

Text

Since computers can display a variety of fonts, in innumerable colors and combinations, multiple fonts in beautiful colors and backgrounds feature in almost all the multimedia applications and the ultimate result appears far better than the printed texts.

Graphics

This includes, pictures, photographs, graphs and charts and other art works. It is this media that makes up a visually fascinating material. The old proverb "A picture is worth a thousand words' still holds true.

Animation

This refers to the artificial movements of texts or other multimedia objects created in virtual environments, using specialized software packages. Animations are primarily used to demonstrate an idea or illustrate a concept. Video is usually taken from life, whereas animations are based on drawings. Animations are perhaps the most interesting part of multimedia computing but are extensively time consuming while creating and demand heavy artistic capabilities.

Audio

This includes speeches, music and other types of sounds. Audio element is generally used to enhance the usual multimedia environment.

Video

This includes the actual video clips that could be embedded right over the applications and can be played back without a hitch. The sizes of the clippings are usually much smaller than that from video cassette players. [9]

Examples of individual content forms combined in multimedia:

Text   Audio   Still Images

Animation   Video Footage   Interactivity

(Figure No.1)

CLASSIFICATION OF MULTIMEDIA

Interactive multimedia

A multimedia application is called interactive multimedia, if the user participates in every stage of the proceedings as the application advances. The degree of interactivity may vary from application to application. Most of the CD-ROM titles and Games-ware are of interactive nature.

Non-interactive multimedia

Non-interactive multimedia is something; say a corporate presentation or a multi-media demo, in which the audience just watch the show as it proceeds from the beginning to the end in a sequential manner. [10]

MAJOR CHARACTERISTICS OF MULTIMEDIA

Multimedia presentation may be viewed in person on single stage, projected, transmitted, or played locally with a media player. A broadcast may be a live or recorded multimedia presentation. Broadcasting and recordings can be either analog or digital electronic media technology. Digital online multimedia may be downloaded or streamed. Streaming multimedia may b live or on-demand.

Multimedia games may be played in person in an arena with special effects, with multiple users in an on-line network, or locally with an offline computer or game system.

The various formats of technological or digital multimedia may be intended to enhance the user's experience, for example to make it easier and faster to convey information. On in entertainment or art, to transcend everyday experience. Online multimedia is increasingly becoming object oriented and data driven, enabling applications with collaborative end-user innovation and personalization of multiple forms of contents of websites like photo galleries with both images, pictures, and title, text user updated, to simulation whose co-efficient, events, illustrations, animations or video are modifiable, allowing the multi-media 'experience' to be altered without reprogramming. [11]

GENERAL APPLICATIONS OF MULTIMEDIA

Multimedia technology is used for different purposes by various persons in different organizations, offices, institutions and in different environments. The main function of the multimedia is to collect, store, organize, dissemination etc. of information by various methods and at different places. Some of common applications of multimedia are as follows.

   a.   It's used in instructions/training and technical presentation.
   b.   In multimedia communication such as multimedia e-mail, personal conferences, video phones, video conferencing etc.
   c.   In public information points/kiosks for libraries, museums hospitals, tourist sites, moments etc.
   d.   In medical information systems.
   e.   In multimedia databases and multimedia information banks.

f.   In multimedia newspapers, books and other information sources.
g.   In reference books such as encyclopedias and directories.
h.   In archival systems.
i.   In geographical information systems.
j.   In electronic publishing.
k.   In technical writing and engineering designs.
l.   In entertainment.
m.   In conferences, trade shows, museums and libraries.
n.   In the catalogue of information products
o.   In tourist information system.

USE OF MULTIMEDIA TECHNOLOGY IN LIBRARIES

Many big libraries of the world such as Library of Congress, British Library are building their collection in multimedia technology form in order to make the teaching learning process more effective. The collection includes historical books, pamphlets, photographs, folk songs, movies and geographical sources and these are converting into multimedia CD-ROMs.

Primarily, multimedia technology enabled a single user to interact with several applications: it was not possible to provide viewing and interactive capability to a number of users simultaneously and on demand. Multimedia networking has provided the ability to disseminate information to a wide range of users in educational institutions, libraries, etc. in order to inform and train large number of users in uniform and consistent manner.

Hypermedia Information Retrieval System

Hypermedia information retrieval system is a hypertext version of large and comprehensive unnoted bibliography of hypertext/hypermedia information. Compiled from variety of sources including periodicals and online information databases, it is intended for educational and training purposes only and no warranty is made as to the suitability of anything including in this stack for any specific purpose.

Multimedia Library Reference and General Collection

Vast collection of information in the form of optical storage devices such as CD-ROMs, DVDs, etc. is available in digital format and can be presented in multimedia formats. The users can view any subject at any time, based on their information needs.

❖ The reference and general collection consists of
❖ Encyclopedias
❖ Dictionaries, Directories
❖ Year Books
❖ Electronic Books
❖ Reference Manuals
❖ E-journals, Electronic Newspapers
❖ Hypermedia fiction.

Electronic Publishing

The emergence of CD-ROM technology, CD-Writers and recordable CD-ROMs solve some of the problems of storing and archiving their rare and less used materials. Now several big libraries have started publishing their special collections, image databases, OPACs etc. in multimedia CD-ROMs. It is one of the most viable alternatives to paper based publishing.

Multimedia Based Databases

Now days a large number of photographs, artifacts, audio recording and textual material in various collections are available in libraries. Multimedia helping the librarians in integrating all the information from various forms/sources, subject wise and meaningful multimedia databases both for day-to-day use and archiving.

Instruction / Training

Multimedia systems were initially very expensive to develop, early users of training systems reported overall benefits from the use of the technology. The savings n training costs are achieved. Various libraries have started using multimedia as a tool to train their staff.

Library Walkthrough Programmes

Many libraries in US and Europe started using hypermedia for designing library 'Walkthrough Programmes to provide quick reference to their library users.

Electronic Library

Several electronic library projects such as ELINOR, OCLC, etc. are underway to cover their print media into digital multimedia collection to attract more and more users. This media has the capacity to store, manipulate and transfer information in the form of text as well as audiovisuals. It is possible to combine both of them.

Multimedia Catalogues

Interactive multimedia electronic forms of catalogues from publishers etc. are being distributed in mail order catalogue market. Printed catalogues are one of the important information sources particularly in technical libraries.[12]

LIMITATION OF MULTIMEDIA

There are some limitations also in using multimedia technology.
a.   Multimedia hardware and software's are much costly.
b.   Multimedia software is not available in more number.

c. There are so many drawbacks also in storage technology in multimedia.
d. No hardware and software is freely available to setup big sized multimedia digital libraries.
e. There is lack of trained personals also to develop and management of multimedia databases.
f. More time is needed to multimedia function.

CONCLUSSION

In this paper we see that multimedia is one of the digitized information which is now being used by the users in the libraries. The main strength of use of multimedia technology is its interactivity and has become strong medium for training and instructions. At present most of the publications are available with multimedia application. Though it has recently entered into the library field but very soon and will take the important position in library world also.

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