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Preservation of E-Resources: An Overview

Dr.Satyaprakash Singh
Librarian,
Maharaja Agrsen College, University of Delhi, India

Abstract

The present scenario Digital Libraries may be the responsibility of computer scientists who do not necessarily bring skills in content management, organization and Preservation. The electronic resources has emphasized the digital environments speed and ease of dissemination with the little regard for its long-term preservation and access. To some electronic libraries, that is those libraries that are moving toward provision of materials in electronic form, have been swept up in this attitude as well, dissemination and announcement processes that have been part of the path from creation to archiving and preservation in the print environment. Publisher and librarians who traditionally managed this process must look to computer scientists to develop systems that support these activities Electronic resources is information that is born digital or that has Primary version in digital form. ***Keywords: - Electronic resources, libraries, preservation etc.***

INTRODUCTION

Modern scenario we are moving towards paperless society. Digital preservation is a vast and complex issue which-involves many aspects and areas of expertise, archiving and preservation electronic journals is perceived by academic libraries while the second concerns the organizational practices implemented in this area; I conclude with a comparison between the sources are the professional literature, surveys and recommendations as electronic collection management and preservation carried out at different times in academic libraries in the world. In digital environment, it becomes necessary to preserve the information and use it again & again as per the requirement which lead us towards the usage of e- resources preservation. For e-resources preservation, the first step is digitalization. Digitization is the word given to the conversion the materials can be hardcopy materials to an electronic format. Often the digitized

materials can be made accessible via Internet, but they can also be disseminated on CD's or other media. The concept of preservation can be characterized as communication with the future. We know that in the future new technology will be used that is more cost effective and more difficult than current technology. The preservation environment will need to incorporate to new type of storage systems, new protocols for accessing data, new data-encoding formats, and new standards for characterizing provenance. When dealing with crucial information such as important contracts or decisive administrative documents people still often fall back on the use of paper.

DEFINITION OF E-RESOURCES PRESERVATION

According to Trusted Digital Repositories, "Digital Preservation encompasses a broad range of activities designed to extend the usable life of machine-readable computer files and protect them from media failure, physical loss, and obsolescence."

Several terms will be used throughout this lecture. They are defined here. In some cases, these definitions are for consistency within the presentation and are not indicative of general consensus within the community.

Born digital– Materials that are created in bits and bytes rather than being digitized from paper or other analog medium.

Digital archiving – storing the digital information for long term preservation.

Digital preservation – keeping the bits and bytes safe and unaltered for a long period of time.

Digitization – converting materials in non-digital form (analog) such as paper, to digital form.

Emulation – running old products by recreating the environment of the old hardware and software without actually using the old hardware and software.

Long-term access– the ability to use a preserved object long after its initial preservation

Migration– moving a digital product from one version of a program, operating system or hardware
Environment to another over time

Recapturing– copying the content from the original resource again in order to ensure that changes made to the resources are incorporated in the archival version

Refreshing– moving a digital object to a new instance of the same media, retaining the same operating system and hardware environment

OWNERSHIP AND LICENSING

In the field of e-journals the license control access to their leaves of data: (a) the current fear. (b) Back issues. (c) The copy of the current year, provided by the publishing in a determined format, which can be installed on the local sites as an archives copy. According to the definition of the Digital Library Foundation (DLF). In this paper; perpetual access' designates the right to permanently access the licensed materials paid for during the period of licensed materials for preservation purposes.

The purchase of print publication has nothing in common with a licensing contract, in the same way that buying an apartment has nothing in a common with a rental contract. In the first case we talking about the acquisition of a physical artifact that automatically provides permanent possession (ownership) of the object involved in the transaction. A license, instead, is a contract that defines the terms of use of resource for a determined time period: in practice, through this mechanism, libraries rent the use of information resources without acquiring ownership (and without capitalizing) and remain without it when the contract expires. The use of book is governed by copyright law, which gives libraries the right to offer it for free consultation, the right to lend it, the right to reproduce it and the right of perpetual archiving. The electronic license, instead, is governed by a private contract, based on which access is guaranteed for a determined length of time according to methods established by specific clauses is guaranteed at the time of the contract on a case by case basis**.**

DIGITAL RESOURCES

Open Access Journals

Open access journals are e-journals that are freely available (some open access journals have supplementary fee-based print versions as well). They mirror the quality assurance practices of conventional journals, such as editorial oversight, peer review, and copy editing. The extent to which they have an organizational infrastructure similar to that of traditional publishers varies according to whether they are revenue generating (this includes both commercial and nonprofit publishers) or what I term "no profit," meaning they literally make no money from their publishing endeavors. The existence of fee-based add-on products, such as supplemental print versions, is another factor. As noted earlier, electronic-only publication offers some meaningful cost savings, since physical reproduction, storage, distribution, and claiming costs are eliminated. Open access advocates recognize that it costs money to produce journals and that viable business models are required to accomplish this, even though they may be unconventional.

Describes the complexity of the Preservation process above all when standards and technologies are still as of yet insufficiently developed. In contrast with paper preservation, which could tolerate inertia and discontinuity, digital preservation requires active and constant maintenance. This could mean that, in the digital environment, preservation is a responsibility which not may be possible for every library.

PRESERVATIONS AND PRACTICES IN THE DIGITAL ERA

The term of the problem were already largely identified in the first phase of the diffusion of e-journals. In this period the main objective of library managers was obtaining the widest possible availability of on-line resources and reinforcing the technological infrastructures of their sites in order to efficiently enhance user access. Libraries continued to acquire, also because, generally speaking, the lice rising models imposed the combined acquisition of other version (electronic and paper). The publishers concerned issues of more immediate impact such as price, IP access definition of the “authorized users,” back issues, clauses for downloading and

ILL/documents supply. Some studies carried out in other areas and time periods demonstrate that, in practice the attitude of libraries concerning digital carried out in other areas and time periods demonstrate that in practice, the attitude of Libraries concerning digital preservation has not mode much progress since then.

PERCEPTIONS AND PRACTICES IN THE PRE-DIGITAL CONTEXT

Some indications in this regard can be found in the debate concerning collections management several years ago, when digital technology had arrived but its impact a library activities was still rather limited. Particularly interesting is a large in-depth study on preservation policies and practices in British Libraries in the early 1990s.

DIGITAL PRESERVATION

For long time access the following preservation strategies have been adopted for the preservation of digital objects:-

Materials- Selection

Preservation of Collection should be based on the conditions of materials, value utility, rarity etc. it should be done on priority bases.

Digitization

Digitization processes are highly cost consuming process in the preservation process which can be done in-house or outside the organization/institutions. It includes assessment and selection of source material, digitization assessment, full digitization quality assessment, post editing, and application of metadata.

Preservation Technology

The final phases of the project consist of a program of technology development to assist mass digitization and preservation activities in the archives. This starts with surveying and documenting current methods of preservation work; documenting the factors of time, cost, and quality; and identifying key areas of high cost or time and areas of low quality. It also involves

surveying the opportunities offered by new technology (for example, digital mass storage). The same factors of time, cost, and quality are to be specified, but new business opportunities and their potential costs and benefits are also being documented. On the basis of the preceding analysis, the project is identifying key technology gaps with regard to archive preservation and specifying in detail the requirements of the technology. The overall objective of the development phase is to produce new links in the preservation workflow that substantially reduce the cost of archive preservation.

ADVANTAGE

The survey has been completed and already has demonstrated its value in quantifying the scale of the challenges that broadcast archives face and in identifying cost elements of preservation and potential benefits of investment. Collecting the information was laborious, but the sharing of information on costs and potential savings is seen as immensely valuable. The technology development is aimed at establishing "preservation factories" with throughput on a massive scale. Any bottlenecks are being identified and opportunities for automation and development of new tools are being explored. It is too early to say how successful this part of the program will be.

Audiovisual archives with very heterogeneous collections may have limited scope for mass preservation processes. Nonetheless, it is believed this approach will be essential for broadcast archives. It was also noted that cost models are a major and complex issue. Accounting practices may be critical to the process used. In organizations with few technical staff, it may be easier to fit preservation work into small-scale activity as part of existing programs and absorb the costs in ongoing staff budgets rather than to establish specific preservation programs.

DIGITAL PRESERVATION STRATEGIES

LIBRARIES CAN PRESERVE OA MATERIALS

Another area of traditional library responsibility is preservation, and libraries have already begun to tackle the difficult task of digital preservation of e-journals, notably through the LOCKSS project. While the preservation of biomedical open access journals is ensured by

PubMed Central, other types of open access journals do not have a similar digital archive. The most pressing need is the preservation of a significant number of "no profit" open access journals, which can be in real danger of ceasing to be available. Open access journals from conventional publishers have similar preservation needs as their traditional counterparts. While "dark" open access journal archives are unquestionably better than no archives, their contents need to come to light when the journals within them cease to be available on the Internet from their publishers.

As was noted earlier, libraries are likely to view institutional repositories as permanent entities, and, consequently, to have assumed the digital preservation burdens associated with their contents. Other digital archives may be in long term danger (e.g., disciplinary archives that house digital materials about one or more disciplines created by authors worldwide). The preservation of e-prints has been a controversial topic in the open access movement, with the thought being that the publisher's copy is the archival copy. However; some e-prints may never be published. Moreover, there can be other types of digital objects in non-institutional digital archives, such as technical reports and digital presentations. Should these materials be preserved? If the answer is yes, then libraries may consider doing so.

WILL OA TRANSFORM ELECTRONIC RESOURCES LIBRARIANS' JOBS?

Will OA *change* electronic resources librarians' jobs? Yes, if their libraries want to provide access to open access materials. To do so, electronic resources librarians must understand OA concepts and systems, including search systems such as the *Directory of Open Access Journals*, the Institutional Archives Registry, OA Aster, and Google Scholar. They will need to establish (or help establish) collection development policies for OA materials, devise strategies for incorporating selected materials into appropriate electronic resource finding tools, track OA resource URL changes and maintain links, and facilitate user access to selected external finding tools. The identification of desirable OA materials is more challenging than the identification of conventional electronic materials because there are a large number of potential suppliers, not a limited number of commercial vendors, and these suppliers typically have no special relationship to the library. Electronic resources librarians will not need to license OA materials or restrict access to them. Electronic resources librarians will play a major role in helping their libraries to determine whether to go further than mere access and to support OA

through institutional memberships that subsidize author fees or through other mechanisms. If such support is desired, they will help deal with the collection development implications of this decision and handle the arrangements for such support.

DIGITAL PRESERVATION NEEDS

In order to preserve digital materials on a scale commensurate with mass storage capabilities and in formats that are accessible and usable, it is necessary to articulate some basic requirements. These are two ways to examine digital preservation requirements: from the perspective of users of digital materials and from the view of libraries, archives, and other custodians who assume responsibility for their maintenance, preservation, and distribution. Libraries and archives will not accomplish their preservation missions if they do not satisfy the requirements of their users. Conversion from analog to digital formats and migration to new generations of technology will be raped, accurate, and inexpensive enough to permit very large scale transfers of heterogeneous materials. Storage space requirements will be minimal and not demand highly sensitive environmental control. To make digital preservation affordable to the widest possible range of organizations and individuals, equipment's, media and maintenance costs must be modest of e-resources.

COMMON PROBLEMS OF OFF-LINE DIGITAL MEDIA

Digital storage media and hardware are subject to numerous internal and external forces that can damage or destroy their readability, which includes resources instability, improper storage environment (temperature, humidity, light, and dust), overuse, natural disaster, institutional infrastructure failure due to electrical or some others, hardware, improper handling by human beings, theft and storage. General common problems are:

i. Handling Issues Improper handling enables the digital resources towards damage and destroys their readability. Though many digital media give the impression of sturdiness and durability, they can be damaged by too casual an approach to use**.**

ii. Life Expectancy

This depends on the utility of the resources carried out by users and changing of technology, which could be avoided by taking the performance of media manufacturer and quality of the

material. It should be tested properly by periodic testing by replacing the media, which produces error on the monitor.

GLOBAL PROJECTS ON DIGITAL PRESERVATION

Electronic Resources Preservation and Access Network. The Electronic Resources Preservation and Access Network (ERPANET) project was launched in November 2001 and will run initially for 36 months. It will make accessible tools, knowledge, and experience in the preservation of digital objects. It will bring together research institutions, memory, organizations, the information and communication technology industry, and entertainment and creative. (For example, brand casting) industries, and provide an effective multidisciplinary knowledge and resource- sharing infrastructure. ERPANET will enhance the Preservation of cultural heritage and scientific objects through nine core objectives. It will Identify and raise awareness of information about the preservation digital objects;

Appraise and evaluate information sources and developments in digital preservation and make available results of research, including ongoing EU-supported projects;

Provide an inquiry and advisory service on preservation issues, practice and technology;

Implement six development workshops to bring together experts to tacks key preservation issues;

Hold a suite of eight training seminars based on best practice reflecting the needs of community;

Develop a suite of tools, guidelines, templates, and 60 case studies;

Stimulate research and encourage the development of standards in the areas of digitization and digital preservation from within existing EU-supported projects and within Europe;

Build an online community;

and Stimulate awareness among software producers of the preservation needs of the user community.

CONCLUSION

The Vision of the National Digital Information Infrastructure and Preservation Program is to develop a national strategy to collect, archive, and preserve the burgeoning amounts of digital content, especially materials that are created only in digital formats, for current and future generations. The e-resources movement is not the only potential solution to the serious problems

that libraries, information centre, and resource centre, face in the conventional scholarly communication system, but it is a very important one, and it does not require the other strategies be abandoned. The voice of libraries needs to be heard more strongly in it. The e-resources preservation has gained considerable traction in the last six years. It has become, and it has begun to transform the scholarly communication system.

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