DIGITAL PRESERVATION INITIATIVES IN INDIA: CURRENT SCENARIO AND CHALLENGES

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Abstract:

Digital Preservation is essential to preserve digital information for long-term use. Digital Preservation is considered a global challenge, and many countries initiated Digital Preservation Initiatives in 2000. In India, Digital Preservation Initiative began in the year 2008 onward. The Centre of Excellence for Digital Preservationwas established at CDAC. The CDAC have taken a significant step to develop the Digital Preservation standards and various Tools. **This paper takes overview Digital Preservation Initiatives and future challenges in India.**

Keywords: Digital Preservation in India, CDAC,

Introduction:

India is a country rich in both tangible and intangible cultural heritage treasures. India has the most excellent repository of manuscripts, with an estimated 5 million ancient manuscripts. Many other cultural resources are also available in India's archives and museums. Indian Academic Community is archiving many unique contents in digital repositories. Digital Preservation concerns born-digital documents that have been converted to digital documents. Digital items are more sensitive than analogue materials by definition and require immediate attention from the moment they are created. This paper aims to provide an overview of the digital Preservation in Indian current and future Digital Preservation Challenges in India.

What is digital Preservation?

"Digital preservation is the active management of digital content over time to ensure ongoing access" (http://www.digitalpreservation.gov/about/). The Digital Preservation Coalition (DPC), defines "Digital Preservation is the series of managed activities necessary to ensure continued access to digital materials for as long as necessary" (DPC, 2015). Digital Preservation is not a standalone activity. "Digital preservation is a combination of policies and workflows that dictate the active management of digital objects to ensure their continued authenticity and meaningful access over time" (Baucom, Erin, 2019)

Digital Preservation in India:

Digital Preservation in India is an essential area of concern due to the country's vast number of digital resources. These include cultural heritage materials, government records, academic research, and more. Preserving these resources is crucial to ensure their long-term accessibility and usability for future generations. India is a rich source of cultural heritage information.

The first "digital preservation" initiative began in 1994, but the concepts of digital Preservation were introduced in India very late, only in 2008. In 2009 as part of Digital Preservation Programme (NDDP), "Indo-US Workshop on International Trends in Digital Preservation" was organized. Based on the recommendation of National Study Report on Digital Preservation Requirements of India, 2010, The "Centre of Excellence in Digital Preservation" was established in 2011 at C-DAC, Pune, India. India was lagged behind 10 years to initiate national level digital preservation initiative compare to USA Initiated digital preservation project NDIIPP in the year 2000.

The NDPP has identified six key focus areas: digital asset management, metadata standards, preservation planning, format migration, risk management, and capacity building.

Centre of Excellence for Digital Preservation of C-DAC Pune developed various tools, standards and best practices for digital Preservation and various tools tested on pilot digital repositories in collaboration with Indira Gandhi National Centre for Arts; New Delhi; National Archives of India, New Delhi; Stamps and Registration Department, Hyderabad, these projects are successfully launched and available in the public domain. The details about tools, standards and pilot repository projects is available at NDPP website: http://www.ndpp.in/index.php/aboutus

Ministry of Culture has taken initiatives to preserve cultural heritage through digitization and digital preservation efforts. Several institutions, including the National Museum, the National Library, and various state archives, have undertaken digitization projects to preserve and provide access to their valuable collections. The

Ministry of Culture initiated several projects to protect and provide cultural heritage access, like National Manuscript Mission (IGNAC Project), and India Culture Portal (Formerly NVLI), to digitize and preserve heritage assets in digital formats.

The following are the important landmark in Digital Preservation Initiatives in India:

- National Workshop on Digital Preservation (2008)

- Indo US Workshop on Digital Preservation (2009)

- National Meet of Expert Group Members (2010)

- IFLA International Conference on Convergence of Libraries, Archives and Museums (ICLAM) 2011
  Organized by NIFT, New Delhi

- APA CDAC International Conference on Digital Preservation and Development of Trusted Digital Repositories (2014)

- A course on Audit and Certification of Trustworthy Digital Repositories (2017)

India establishes World's first certified Trustworthy Digital Repository as per ISO 16363

In November 2017, the National Cultural Audiovisual Archive (NCAA) was recognized as a Trustworthy Digital Repository under ISO 16363. It is India's and the world's first certified Trustworthy Digital Repository. This certification was granted by the Primary Trustworthy Repository Authorization Body (PTAB) in the United Kingdom.

Pilot digital repositories established by C-DAC in collaboration with user organizations

- **Pilot digital repository for National Cultural Audiovisual Archives (NCAA) project of Indira Gandhi National Centre for Arts, New Delhi** (https://ncaa.gov.in/repository/)

- **Pilot digital repository established at KalānidhiLibrary, Indira Gandhi National Centre for Arts, New Delhi**
  (https://ignca.gov.in/divisionss/kalanidhi/reference-library/)

- **National Portal and Digital Repository for Museums of India established at C-DAC, Pune for Ministry of Culture**
  (https://museumsofindia.gov.in/repository/home)

Digital Preservation Standards and Tools:

The CDAC developed below digital preservation standards for the Preservation of digital records.

- **Best Practices and Guidelines for Production of Preservable e-Records (PROPeR)**

This standard specifies best practices and guidelines for creating and administrating archivable electronic records in the context of e-governance.

- **e-Governance standard for Preservation Information Documentation (eGOV-PID) of Electronic Records**

The eGOV-PID provides the standard metadata dictionary and schema for specifying an electronic record's preservation metadata. This standard suggests that the majority of the preservation information (metadata) be captured automatically when the e-government system establishes the final e-record.

The CDAC developed following Archival Tools & Systems for Digital Preservation

- e-RECORDS DIGITĀLAYA : **Electronic Records Management and Archival System**

- SANSKRITI DIGITĀLAYA   : **e-Library and Archival System**

- **DATĀNTAR :e-Records Extraction Tool**

- **e-RUPANTAR : Pre-archival Processing Tool**

- META- PARIVARTAN**: Any To Any Metadata Conversion Tool**

- SUCHI SAMEKAN: **Metadata Importing and Aggregation Tool**

- DATA HASTĀNTAR : **Data Encryption and Transfer Tool**

- **e-SANGRAHAN : e-Acquisition Tool**

- ABHILEKH DIGITĀLAYA : **Government Archival System**

- Records Reporting System : eGOV DIGITĀLAYA : **Migrated Data Authentication and Access Portal**

- **PDF/A-1b Converter Tool**

Digital Preservation Challenges in India:

The following are the major present challenges needs be addressed about digital Preservation.

- Lack of National Level Legislation

- Lack of National Digital Preservation Policy Development

- Lack of Digital Preservation Awareness/Advocacy

- Lack of Digital Preservation Education/Training /Courses

- Digital preservation community/Forum

Conclusion:

In India, digital preservation development is limited to government organizations. Due to the lack of legislation and a national policy on digital Preservation, producers of digital information do not place a premium on conserving digital information. The CDAC has produced various standards, tools, and best practices for digital Preservation in India; however, no studies on tool efficiency are available.To prevent the loss of vital unique knowledge, the Government of India should pass legislation, develop a national-level digital preservation policy, and build a national-level digital preservation infrastructure.

References:

1. Baucom, E. (2019). A brief history of digital Preservation. *Digital Preservation in Libraries: Preparing for a Sustainable Future (An ALCTS Monograph)*, 3–19. https://scholarworks.umt.edu/ml_pubs/31

2. *Centre of Excellence for Digital Preservation*. (2010). National Digital Preservation Programme ; CDAC. http://www.ndpp.in/index.php

3. DPC. (2023). *What is digital Preservation? - Digital Preservation Coalition*. https://www.dpconline.org/digipres/what-is-digipres