

---

## DIGITISATION OF CULTURE

Motebennur Maltesh

Narendra Lahkar

Swati Gajakose

### Abstract

*The present paper discusses about digitisation of cultural heritages of India and other parts of the world encompasses the **Memory of the World** was built on the premise that the cultural society has the responsibility to preserve information about its history and to make it available also for future generations. It also highlights Organization role of metadata and delivery and access. Enumerates key projects taken in western countries and also initiatives in India. Highlights main issues regarding manuscript digitization and archiving.*

**Keywords :** Digitization, Digital Library, Manuscripts, Archiving, Memory of the World

### 1. Introduction

Culture is multi-dimensional, multi-form representation of nature. Cultural heritage enables people to anchor themselves in a time and a place, creates a frame of reference for their actions and provides a value base for their lives. Cultural heritage underpins civilisation, and its plurality must be safeguarded. Archives, libraries and museums (memory institutions) deal with and are keepers of our major resources of cultural and scientific knowledge, both as our inheritance from the past and our legacy to the future. These resources form a significant part of the intellectual capital of the Information Society where they are increasingly being made available to large communities of users in digital form.

### 2. Preservation of Heritage

Culture is preserved through verbal and written forms on subjects like songs, stories, epics, novels, poems, philosophical treatises, manuals, performances etc. Oral Traditions: Performance of **Devanarayan** by Gujjar in Rajasthan, Performance of **Kanayaka** by Komati in Andhra Pradesh, Performance of **Palnadu** in Andhra Pradesh. Represented Traditions: As Poetry & Text in Manuscripts, Books, Palm leaves, as Paintings (viz., Gita Govinda), as performances through Song & Dance.

### 3. Role of Technology in preservation of culture

Modern (Multimedia) Technology can play a major role in preservation and promotion of Cultural heritage. Multimedia encompasses all forms of materials e.g. textual, visual (still and moving) and audio all together to represent the holistic form. The WORLD-WIDE-WEB ([www](http://www)) is wide reaching medium through which anything & everything could be made available to anyone & everyone around the globe.

### 4. Benefits of Digitization

- **Preservation and conservation**

Digital reproductions are virtually immortal, Minimizes handling of originals, Reconstruction using image processing techniques, Use of life-size print reproductions for conservation.

- **Research**

Access to images for researchers, Study of disparate images in new contexts.

- **Collections Management**

Assistance in retrospective cataloging, Researching collection, Assistance with curatorial functions, Managing material movement, licensed use of digital reproductions in advertising and publishing.

- **Dissemination and promotion**

Dissemination of art via the Internet.

- **New Revenue Streams**

Making digital reproductions at lower resolution available to scholars as a paid service, Sale of high quality posters to art patrons around the world via an e-commerce website.

### 5. Digitization of Heritage Knowledge base: India's Initiative Indian Heritage

India perhaps has one of the oldest and largest collections of manuscripts in the world. These manuscripts are in different languages and in different scripts. They are written on different kinds of material like birch bark, palm leaf, cloth and paper. They are in the custody of different institutions like libraries, museums, monasteries, mutts and individuals. Only a small percentage of these manuscripts have been surveyed and catalogued. Catalogues are perhaps available for not more than 20-25% of the manuscript collections in the country. The catalogues do not follow a standard format. A significant proportion of manuscripts are not preserved scientifically. Experts estimate that almost all palm leaf manuscripts may perish due to wear and tear over the next 50 to 100 years. An estimate of heritage wealth of India is as under:

(1). **The National Library, Kolkata, India** ([www.nlindia.org](http://www.nlindia.org)) has in its possession a small holding of manuscripts representing some basic and important branches of knowledge. These manuscript collections are mostly part of some collections belonging to eminent personalities of India, which were donated by their heirs. The details of the holdings are as follows:

1. Paper Manuscripts: 3000 volumes approximately.
2. Correspondence and diaries: 250 volumes approximately.
3. Palm Leaf Manuscripts: 334 volumes approximately.

The following is the language-wise break-up of the manuscripts: **(this could be put in a proper table for better presentation and may be totalled)**

a	Arabic:	681
b	Persian:	955
c	Urdu:	21
d	Bengali:	162
e	English:	255
f	Hindi:	5
g	Tamil:	370
h	Sanskrit:	790

While the Tamil manuscripts in palm leaves are unique in character, the Arabic and Persian manuscripts bear beautiful illustrations, fine calligraphy and elegant bindings. Loose letters, diaries and some magnificent dossiers of correspondence represent interesting and authentic records of important personalities.

The National Library Kolkata also has about 100 volumes of Xylographs comprising more than 800 items, presented to the Library by Hon'ble Dalai Lama after his visit. These are block prints made from bark of rare Nepali trees.

Although the storage environment is satisfactory, the manuscripts are facing natural decaying (yellowing, brittleness, and wear and tear).



Palm leaf manuscripts from the Vaiyapuri Pillai Collection

### A Sample Project

A sample project was undertaken by the National Library, Kolkata with the objective of better understanding on the different issue pertaining to the digitization of Manuscripts.

An excellent Persian manuscript - Tutinamah was chosen for the sample project. The project was jointly envisaged and executed by The National Library and Trinetrix Technologies, a Calcutta based Information Technology organisation.

### About the Manuscript

Tutinamah: A fine and elegant copy of the older and larger version of the well-known tales of a parrot, by Diya-I-Nakhshabi (d. AD 751 - A.D 1350) who composed it by 1330 AD.

This beautiful copy, consisting of 52 stories, is written in clear Indian Taliq within gold and colour ruled borders and contains a beautifully illustrated headpiece. There are about 36 coloured exquisite illustrations created out of vegetable and organic dyes, some of which are interesting. The entire manuscript is based on hand made paper and is in bound form.

This work was later adapted and abridged by Mohd. Qadri and the Urdu version of the same were published from London in 1852.

### (2). National Manuscript Mission, New Delhi (NMM) ([www.namami.org](http://www.namami.org)):

NMM is surveying and documenting manuscripts throughout the length and breadth of India. With libraries and repositories shouldering the responsibility of conserving their already large collections, there is now a movement to encourage and empower individual collectors in villages and towns to look after their manuscripts themselves.

Number of manuscripts	Estimation
Total Number of manuscripts in India	5,000,000
Indian manuscripts available in European countries	60,000
Indian manuscripts in South Asia & Asian countries	150,000
Manuscripts recorded in catalogues (approx.)	1,000,000

### Percentage of manuscripts language wise -

Sanskrit	67%
Other Indian Languages	25%
Arabic/Persian/Tibetan	8%

There are over 77 libraries outside India where major collections of manuscripts of Indian origin exist. Some of the major foreign libraries are:

- Denmark: Royal Library, Copenhagen

- France: Bibliotheque Nationale, Paris
- Germany: Preussische States Bibliothek Berlin, Universitas Bibliothek, Leipzig, Staats Bibliothek, Marburg, Bayerische Staats Bibliothek, Muenchen
- United Kingdom: British Library, London, Royal Asiatic Society, London, Bodleian Library, Oxford, Indian Institute, Oxford, Cambridge University Library, Cambridge
- Nepal: Darbar Library, Katmandu
- Pakistan: Punjab University Library, Lahore
- Sri Lanka: Museum Library, Colombo

**(3) . Khuda Baksh Oriental Public Library** ([www.kblibrary.org](http://www.kblibrary.org))

It is one of oriental libraries having rich collections of Persian, Arabic Urdu and other language manuscripts. The descriptive catalogue is in 30 volumes which appeared in 1923 and reprinted in seventies besides other catalogues and publication compiled by different authorities. Now the institution has launched a website and a link is given to the whole catalogue of the library in a tabular form. The table has hyperlinks to different volume of the catalogue which can be browsed as JPEG files and browsed from as a file from top to bottom. The whole project has been undertaken by National Informatics Centre. It has not introduced any retrieval mechanism as the document is treated as collection of image files in JPEG format. The catalogue ironically can't be accessed under metadata or any useful descriptor.

**(4) . Raza Library Rampur Uttar Pradesh:** ([www.razalibrary.com](http://www.razalibrary.com))

The library developed under the patronage Raza of Rampur was contains a collection of about 10,5000 volumes has appeared recently on the web with an interface for the manuscripts. It displays information of two manuscripts on a single screen giving brief bibliographic information in Romanized form along with a folio of the manuscript scanned. However the collection is limited to few manuscripts only and further work is in progress. The retrieval engine for the data is missing as they have not structure the data nor made use of nay digital library software.

**(5) . Kashmir University Project:** ([www.makhtootat.org](http://www.makhtootat.org))



The department of library & Information Science University of Kashmir Srinagar J&K has undertaken a project sponsored by the UGC for designing a database of medieval manuscript Digital Libraries for Medieval Manuscripts (DLMM) available in Kashmir. The work is in progress and is made accessible on web after proper test and assessment .

**(6). Panjab Languages Department Project**

The Panjab Languages Department has made history by becoming the first Government department in Panjab to get its Manuscripts Section digitized. The project was done in collaboration with The Nanakshahi Trust. The project commenced on 13 June, 2006 with signing of a MOU, commemorating the 400<sup>th</sup> martyrdom anniversary of Guru Arjan Sahib whose life and contributions from the 'sabad' to 'shahadat' exemplify his God-like persona.

Nanakshahi undertook to digitize all the 604 manuscripts comprising about 2, 82,000 pages. The project was a voluntary service by Nanakshahi to the Languages Department, without any monetary obligation on the Department's behalf.

Manuscripts digitized are from 17th to 19th century. They include manuscripts of Guru Granth Sahib, Bhagvat Geeta, Bachitar Natak, Dasam Granth, Tuzuk-e-Jahangiri, manuscripts of Panjabi folk lore and literature and few medical manuscripts. Few manuscripts were illustrated with beautiful miniatures.

Amongst the other major projects completed to-date is the digitization of Manuscript sections of Government Museum and Art Gallery, Chandigarh and Kurukshetra University.

**(7). Digitization in the Panjab University Chandigarh ([www.puchd.ac.in](http://www.puchd.ac.in)):**

Panjab University Chandigarh (India) started the digitization process in the year 2004. The crucial question of digitization of the university heritage came up in 2004. This was essential largely because of the importance of these holdings having both cultural and historical significance. This warrants us to summarize the need and significance of the colonial government of India to open such University in its northwest province. The first phase of digitisation of rare manuscripts and government documents started by the Panjab university Library and work is in the progress, after first phase they are planning to put into web for the use of researchers and scholars from India and abroad.

**(8). The UNESCO Project Entitled the Memory of the World**

(<http://www.whc.unesco.org/nwhc/pages/home.pages/homepage.htm>)

UNESCO Memory of the World was built on the premise that the cultural society has the responsibility to preserve information about its history and to make it available also for future generations. It aims to stimulate a responsible approach to the sources from which our historical consciousness grows and to contribute to the general availability of information about our history and culture. This project aims to initiate and to support the safeguarding of existing documents not only for this generation

---

but also for the future ones. In addition, the project concerns oral traditions which have not yet been recorded. Unfortunately, today's overproduction of information could easily wipe out the older documents concerning our past history. The abundance of information of average and below-average quality generates paradoxically the demand for new, unusual, exotic, and uneasily available information. This explains the growing interest in old manuscripts and their scientific and commercial value. However, public access to old manuscripts and archive holdings undoubtedly causes a substantially quicker disintegration of these originals. UNESCO has a well-established "Memory of the World Register," it can be accessed by visiting the website (<http://www.whc.unesco.org/nwhc/pages/home.pages/homepage.htm>). India's potential to add to manuscript collections to this register is vast- and simultaneously the preservation needs are very high.

**(9). Manuscript Digitization and Electronic Processing of Manuscripts in the Czech National Library** (<http://www.nkp.cz.>):

More or less systematic digitization of manuscripts and other historical materials started only ten or fifteen years ago. In the case of the National Library of the Czech Republic it was in 1992 when the cooperation started within the **UNESCO programme Memory of the World**. The National Library of the Czech Republic has accomplished a great progress since these sheepish beginnings so that now its digitization team placed itself among the most advanced teams worldwide. The acquired experience during the twelve years shows that the large and massive digitization of manuscripts and other historical materials means a big challenge not only for the computer science and library and information science but for the history in large sense as well because it leads to the paradigm shift in general.

**(10). Text and Illustration: The Digitisation of a Medieval Manuscripts**

(<http://www.clues.abdn.ac.uk>):

The Medieval Aberdeen Bestiary as the first project in Aberdeen University Library's digitisation programme. The choice of the Aberdeen Bestiary, executed in England around 1200, as the first of the University Library's digitisation projects supported by the Joint Funding Council's Initiative for Specialist Research Collections in the Humanities, was obvious and challenging. Obvious, in that digitisation offered a surrogacy method (the original codex continues to be housed in secure, environmentally controlled conditions) for a manuscript that is the focus of a sustained level of research, and which forms a component in ever larger undergraduate and postgraduate classes. It was also appreciated that, once Web mounted, the electronic version would provide an unparalleled mode of access (to be delivered at a quality suitable for undergraduate work and for most research

purposes) to a manuscript that hitherto has remained known to many only through published articles and photographs. No printed facsimile has ever been produced, and extant unpublished microfilm copies serve only the most basic of scholarly enquiries. The range of expertise to take forward the Project expeditiously was immediately available within the University, and a Project Team of six was formed, committed to specific aspects of the enterprise: historical and codicological commentaries; textual apparatus; photographic work; IT and Web authoring; management and administration. The complex nature of the challenge resided in the facts that expert team has to digitise a manuscript book in vellum (and not a collection of separate, discrete leaves) some 800 years old, that there were legitimate concerns over the vulnerability of the original whilst being digitised, that it is illustrated and decorated throughout (though not on every page), that the importance of the manuscript is further elevated by its still carrying evidence of its mode of execution, and that it was not particularly intelligible other than to a limited number of specialists.

Moreover, the Team foresaw that the placing of the digitised version within a supporting framework of transcription, translation and art historical commentaries would dramatically increase its usability. The Project has therefore consisted of three interrelated operations:

1. The digitisation of the entire 104-leaf codex, page-by-page;
2. The preparation of series of commentaries (primarily, though not exclusively, to support an academically-based constituency) on the history of Bestiary texts, on the provenance of the manuscript, on specific art-historical and codicological features. Short commentaries were also being made available to accompany the individual images of full pages and details thereon. Concurrently, the original Medieval Latin was transcribed, and a translation supplied for less experienced users, to bring out the allegorical and Christian moralising nature of much of the text;
3. The adoption of an overall Web design.

**(II). National Library of Australia, Adelaide Digital Collections Project**

(<http://pandora.nla.gov.au/index.html> ):

National Library of Australia, Adelaide digital collection project started in the year 1996. Long term access to Australian information and research resources in digital form is threatened by a lack of understanding in the community and by governments of the importance of collecting, archiving and preserving Australia's digital documentary heritage and research output. To meet this challenge, the Pandora Archive is selectively archiving and preserving Australian digital publications. Pandora,



which commenced in 1996, serves an important role in preserving access for future generations to today's web based information resources. The Archive now has 12,000 digital information resources. Many libraries in Australia have developed programmes to digitise unique collection materials (such as selected manuscript collections and original pictures) and are also turning their attention to published collection materials (such as newspapers, journals and books). The pace of these activities has been constrained by resource limitations. It is possible to identify many projects which could dramatically expand the digital resources available to users.

The National Library has established a digitisation policy and has already digitised more than 100,000 collection items. It is now planning, in collaboration with the state libraries, to build a significant collection of digitised out-of-copyright Australian newspapers, and envisages the future extension of this approach to journals. Such an expansion of digital collections would represent a major benefit for the Australian public.

#### References

1. [www.nlindia.org](http://www.nlindia.org)
2. [www.namami.org](http://www.namami.org)
3. [www.kblibrary.org](http://www.kblibrary.org)
4. [www.razalibrary.com](http://www.razalibrary.com)
5. [www.makhtootat.org](http://www.makhtootat.org)
6. [www.puchd.ac.in](http://www.puchd.ac.in)
7. <http://www.clues.abdn.ac.uk>
8. <http://pandora.nla.gov.au/index.html>
9. <http://www.nkp.cz>
10. <http://www.whc.unesco.org/nwhc/pages/home.pages/homepage.htm>

#### ABOUT AUTHORS

**Motebennur. Maltesh** is presently working as Deputy Librarian and Library In charge of Rajiv Gandhi University, Aruanchal Pradesh. He received his M.Sc. Geology and B.L.I.Sc. from Kamatak University, Dharwad in 1983 and 1984 respectively. M.L.I.Sc from NEHU, Shillong, Meghalaya in 1994.

**Prof Narendra Lahkar** is the Head of the Department of Library and Information Science, Gauhati University. He has done his Mlib.Sc from Gauhati University, MSc in Information Studies from the University of Sheffield (UK) and Ph.D. from Gauhati University. Presently he is supervising a numbers of research scholars for their Ph.D degree.

**Ms. Swati Gajakose** is secured M.L.I.Sc degree with first class from University of Mumbai. She is also a postgraduate from University of Mumbai and received her M.A (History) and B.L.I.Sc. degrees in 2005 and 2006 respectively. At present she is working with Tata Consultancy Services, Mumbai