

Preserving digital content over time – four key issues

Heather Brown Assistant Director, Paper and Books Artlab Australia
Brown.Heather@dpc.sa.gov.au

I would like to congratulate the Indira Gandhi National Centre for the Arts on organising the seminar on *Digital preservation and access to Indian cultural heritage with special reference to IGNCA cultural knowledge resources*.

This topic is pivotal to the present and the future of Indian cultural heritage.

New digital technologies are providing a gateway with unparalleled access to India's cultural heritage which has been transformed into a whole new universe of digitized images and text.

The IGNCA's key role in digitization and the production of metadata has created a digital repository of national and international cultural significance.

Preserving this digital content over time is challenging. The fragility of digital content is well documented – due largely to rapid changes in software and hardware.

I would like to briefly share some thoughts on four key issues that are relevant to the sustainability of digital collections over time – they are relevant to India, as they are relevant to everywhere. Within them are embedded challenges that still need to be addressed at national international levels.

Technological

Until recently much of the international focus of digital preservation has been on technological strategies.

These include integration of technological strategies such as migrating and emulating, as well as adhering to relevant frameworks such as the OAIS model, and preservation metadata to ensure that a 'trusted' digital repository is created. Likewise, the TRAC (Trustworthy Repositories Audit and Certification) checklist www.crl.edu/PDF/trac.pdf is a useful tool for objectively determining whether a digital repository can be a long-term trusted location for digital content.

Resourcing

As the work of Cornell University highlights, resourcing issues focus on ensuring that adequate staffing and funding is provided - not only for once up digitising costs but also the costs of sustaining the repository over time. (Cornell 2009) This means ongoing funding. It is usually far easier to obtain seed money for start up costs. While it is likely that *unit* data storage costs will decline over time, the overall volume of data the overall volume of data to be stored will continue to grow, and also as digital objects incorporate more features.

Organisational

Again the Cornell work highlights that organisational infrastructure involves commitment which is in turn reflected through the policies and plans for digital preservation. The draft policy for IGNCA is one such example.

In a nutshell, policies are a way of obtaining and formalising commitment right from the top. Without this high level support, digital preservation initiatives will be difficult to sustain.

Organisational infrastructure also involves collaboration - there are many examples within India and also international partners who would be useful collaborative partners. Another key area is skills education and training – the new skill sets that extend beyond the technological skills and link with the organisational and resourcing issues

Interconnectedness – an holistic approach

A potential weakness in many international approaches to digital preservation is the tendency to view the topic in isolation. like a 'silo', without an overall understanding of the interconnectedness of *all* areas of preservation.

Good preservation management is about understanding the potential dynamics of these interconnections. It requires the ability to make and maximize interconnections, informed by a risk management perspective.

An example is interlinking digitization with microfilming to provide both access and a long term preservation medium for the copy. At the same time there may be links with conserving the original manuscripts, or at least ensuring that the whole collection of originals is in a stable, low risk environment. A strategic approach to disaster preparedness and response is another connected thread that has implications for the originals and the various copies – in their digitized and microfilm versions - and so on. Again a strategic and holistic approach to preservation has the potential to make these connections and maximize benefits through understanding the 'bigger picture.'

Summary

In common with digital preservation programs across the world, the effective long term digital preservation of Indian and IGNCA's own cultural knowledge resources will be shaped by the response to these four key issues. If the focus is on one at the expense of the others, potentially the balance will be lost and the risks of losing digital heritage over time will be significant.

And of the four issues, the most subtle, most profound and least understood is the last – the need to understand the interconnectedness of all areas of preservation, in order to maximize the sustainability of cultural knowledge – both digital *and* non digital - over time.

My very best wishes for an engaging and challenging seminar.

The above are my own professional views and do not in any way constitute those of Arlab Australia.

BIBLIOGRAPHY

British Library. 2007 *British Library Digital Preservation Strategy*
www.bl.uk/about/collectioncare/pdf/digpresstrat.pdf

Consultative Committee for Space Data Systems (CCSDS). 2002. *Reference Model for an Open Archival Information System*. (ISO Standard 14721).
www.ccsds.org/publications/archive/650x0b1.pdf

Cornell University Library

Digital Preservation Tutorial www.library.cornell.edu/iris/tutorial/dpm/

Digital Timeline <http://www.library.cornell.edu/iris/tutorial/dpm/timeline/viewall.html>

Digital Preservation Elevator Pitch

<http://comondepository.librarycornell.edu/documents.html>

Digital Preservation Coalition. 2002 *Preservation Management of Digital Materials – the Handbook* by N Beagrie and M Jones Digital Preservation Coalition, UK. (and decision Tree) www.dpconline.org/graphics/handbook/.html

Harvey, Ross 2005 *Preserving Digital Materials* Munchen, K. G. Saur.

National Library of Australia. 2002 A Digital Preservation Policy for the National Library of Australia <http://www.nla.gov.au/policy/digipres.html>

Nestor Working Group on Trusted Repositories Certification. June 2006. *Catalogue of Criteria for Trusted Digital Repositories*. Version 1 (draft for public comment). English translation December 2006.urn:nbn:de:0008-2006060703.
edoc.hu-berlin.de/series/nestor-materialien/8en/PDF/8en.pdf

OCLC, CRL (Council for Research Libraries) & NARA (National Archives and Records Administration) (TRAC) Trustworthy Repositories Audit and Certification: Criteria and Checklist 2007 www.crl.edu/PDF/trac.pdf

OCLC/RLG Working Group on Preservation Metadata. 2002 Preservation Metadata and the OAIS Information Model: a Metadata Framework to Support the Preservation of Digital Objects www.oclc.org/research/pmwg/

PADI (Preserving Access to Digital information) <http://www.nla.gov.au/padi/>

Palm, Jonas 2006 'The digital black hole' [Jonas Palm, Director, Head of Department of Preservation, Riksarvet/National Archives, Stockholm Sweden] http://www.tape-online.net/docs/Palm_Black-Hole.pdf

PREMIS. May 2005. *Data Dictionary for Preservation Metadata: Final Report of the PREMIS Working Group*. Dublin, Ohio and Mountain View, CA: OCLC and RLG.
www.oclc.org/research/projects/pmwg/premis-final.pdf

UNESCO 2003 *Guidelines for the Preservation of Digital Heritage*, prepared by the National Library of Australia. Paris: UNESCO
<<http://www.unesdoc.unesco.org/images/0013/001300/130071e.pdf>>

UNESCO 2004 *Charter on the Preservation of Digital Heritage*. Article 10 Paris: UNESCO
<http://www.unesco.org/ci/en/file_download.php/4cc126a2692a22c7c7dcc5ef2e2878c7Charter_en.pdf>

Webb Colin 2004 'The malleability of fire: preserving digital information' in Feather, John ed. *Managing preservation for Libraries and archives: current practice and future developments* Ashgate, Aldershot pp.27-52
