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Collaboration

1. AHDS (Arts and Humanities Data Service)

<http://ahds.ac.uk>

The AHDS is a distributed service consisting of five service providers (Archaeology Data Service; History Data Service; Oxford Text Archive; Performing Arts Data Service; Visual Arts Data Service) and the Executive. The aim of the AHDS is to collect, preserve, and promote re-use of the electronic resources resulting from arts and humanities research.

2. Cedars (CURL Exemplars in Digital Archives)

<http://www.leeds.ac.uk/cedars>

A three-year eLib project which commenced in 1998 and is led by the universities of Oxford, Cambridge, and Leeds on behalf of CURL. The UK Office for Library and Information Networking (UKOLN) is also a partner, with particular emphasis on the development of preservation metadata. The main goal of the project is "to address strategic, methodological and practical issues and provide guidance in best practice for digital preservation".

3. Digital Library Federation. Preservation of electronic scholarly journals.

<http://www.diglib.org/preserve/presjour.htm>

An initiative commenced by the Coalition for Networked Information (CNI) and the Council on Library and Information Resources (CLIR). The objectives are to establish archival repositories; seek publishing partners to populate the archives; develop the necessary licensing apparatus to ensure libraries' interests are accommodated by archiving strategies being adopted by the repositories; and share experience of publishers, libraries, and repositories to mutual advantage. The initiative has also defined minimum criteria for a digital archive repository which is based on the OAIS model but has been recast to reflect the specific needs of libraries and publishers. A draft document has also been prepared which encourages merging digital archives and repositories to document and enclose their practices in particular areas. This is further indication of the progress towards defining operational requirements and preservation responsibilities based on practical experience.

4. National Digital Preservation Coalition

In 2000 the JISC under the aegis of its Committee for Electronic Information (JCEI) created a new post, the Digital Preservation Focus, in recognition of the increasing strategic importance of digital preservation for the Higher and Further Education communities. A key task was the establishment of a National Digital Preservation Coalition in the UK. Launched in July 2001 the DPC has rapidly established an alliance of major organisations and programme activities to advance digital preservation.

5. National Library of Canada. Consultation on Online Publications

<http://www.collectionscanada.ca/8/7/index-e.html>

An initiative of the National Library of Canada aimed at bringing together key experts from various sectors of the Canadian publishing community with NLC staff to discuss Canadian online publishing issues. This is another example of the leadership role being taken by national libraries to confront the issues associated with electronic publishing and develop strategies to deal with them. While this initiative is seen as preliminary, the NLC "considers it to be the start of a process towards a strategy that meets common objectives".

Update 26 September 2007

This document has been archived with a note that ".. information may be out of date and some functionality lost."

Archived location

http://epe.lac-bac.gc.ca/100/206/301/lac-bac/consultation_online_publications-ef/8/7/index-e.html

6. NEDLIB (Networked European Deposit Library)

<http://www.kb.nl/nedlib>

This project has twelve partners consisting of deposit libraries, archives, and IT developers. Three publishers are also contributing to the project, which runs from January 1998 to December 2000. As well as collaboration between the partners, the NEDLIB website and discussion list, NEDLIB-INT actively encourages communication with others working on the same things.

The three aims of NEDLIB are:

1. To develop a common architectural framework and basic tools for building deposit systems for electronic publications;
2. To address the issue of long-term preservation;
3. To build a demonstrator system, with tools and software, covering all functional aspects of a deposit system for electronic publications (DSEP).

4. PANDORA (Preserving and Accessing Networked Documentary Resources of Australia)
<http://pandora.nla.gov.au>

The PANDORA project began as a National Library of Australia initiative. Once the proof-of-concept archive was established, the NLA sought other deposit libraries as partners to join them in preserving Australian online documentary heritage. This involves state libraries, the other deposit institutions which, with the NLA, have a mandate to collect and preserve Australian non-digital documentary heritage.

5. RLG-DLF 1999 Task Force on Policy and Practice for Long-Term Retention of Digital Materials.

<http://www.rlg.org/preserv/digrlgdlf99.html>

An example of collaboration between two membership organisations, Research Libraries Group (RLG) and Digital Library Federation (DLF) which have both made digital preservation a key priority for action and attention. This Task Force was formed in response to a 1998 survey of digital preservation needs and requirements in RLG member institutions.

6. RLG/OCLC

<http://www.rlg.org/pr/pr2000-oclc.html>

Once again RLG is in partnership with another organisation, in this case, Online Computer Library Center (OCLC). RLG and OCLC are two organisations that have done much separately to progress digital preservation issues but now feel it is timely to explore how they can co-operate to create infrastructures for digital archiving. The first steps towards this wider aim are collaboration on two working documents, one on characteristics of reliable archiving services and another on preservation metadata.

Update 03 October 2007

RLG has merged with OCLC <http://www.oclc.org/>

7. Reference Model for an Open Archival Information System (OAIS) Draft Recommendation for Space Data System Standard. May 1999.

<http://www.ccsds.org/documents/650x0b1.pdf>

The Consultative Committee for Space Data Systems (CCSDS) has been asked by the International Standards Organisation (ISO) to co-ordinate the development of standards to support the long-term preservation of digital information obtained from observations of the terrestrial and space environments. The OAIS Reference Model is the first of this co-ordination effort to reach draft standard and is being used, or at least adapted by an increasing number of organisations. Though initially intended for a fairly specific application, it is intended to be used in a wide range of archiving organisations. This is a good example of both the advantages (consensus; increased consistency; utilising wide ranging expertise and experience) and disadvantages (time to reach widespread consensus; time delay before it becomes an official standard; necessity to adapt the model to specific needs) of international collaboration.

Update 27 January 2006

The draft OAIS recommendation is no longer available, the full specification (2002) can be found at: <http://public.ccsds.org/publications/archive/650x0b1.pdf>

See also [Standards and Best Practice Guidelines](#) .

8. JISC/Publishers' Association Working Group and Joint Working Parties.

http://www.jisc.ac.uk/index.cfm?name=wg_pals_home

Initially set up with a fairly broad mandate to discuss issues of mutual concern between

libraries and publishers, the enhanced mutual understanding between these two groups has been of great benefit in helping to foster co-operation and collaboration in digital preservation as well as other issues. A number of joint working groups have subsequently been established, including one on the development of model licences and another on long-term retention of digital publications. Model licences based on the initial JISC/PA model licence have been developed to ease the administrative burden imposed by multiple terms and conditions. The latter are being adapted by the Cedars project to deal with digital preservation issues.

9. Working Together: A Workshop for Archivists, Records Managers and Information Technologists. Sponsored by the Coalition for Networked Information (CNI) and Committee on Institutional Co-operation (CIC), 18-19 November 1999.

<http://www.cni.org/projects/working.together/wt9911/>

This is the second workshop in an innovative mechanism for overcoming communication barriers between different professional groups. The purpose of the workshop is "to promote the inclusion of archival and records management issues in systems development projects, create incentives for supporting electronic records management concerns, remove organizational barriers that prevent archivists from implementing electronic records programs, and educate archivists and information technologists about their shared responsibilities and interests in preservation of and access to electronic records. Through collaboration among information professionals, we hope to realize these goals."

10. Bernbom, G, Lippincott, J. and Eaton, F. (1999). 'Working Together: New Collaborations Among Information Professionals.' Cause/Effect 22 (2).

<http://www.educause.edu/ir/library/html/cem/cem99/cem9922.html>

11. Berthon, H. and Webb, C. (2000). 'The Moving Frontier: Archiving, Preservation and Tomorrow's Digital Heritage.' Paper presented at VALA 2000 - 10th VALA Biennial Conference and Exhibition, Melbourne, Victoria, 16-18 February 2000.

<http://www.nla.gov.au/nla/staffpaper/hberthon2.html>

12. Dempsey, L. (1999). 'Scientific, Industrial, and Cultural Heritage: a shared approach.' Ariadne 22, December.

<http://www.ariadne.ac.uk/issue22/dempsey>

13. Digital Archiving: Bringing Issues and Stakeholders Together. An Interactive workshop sponsored by ICSTI and ICSU Press. UNESCO House, Paris, 30-31 January 2000.

<http://www.icsti.org/2000workshop/index.html>

Update 23 May 2008

URL no longer available - link disabled

14. McGovern, T.J. and Samuels, H.W. (1997). 'Our Institutional Memory at Risk: Collaborators to the Rescue.' CAUSE/EFFECT 20 (3).

<http://www.educause.edu/ir/library/html/cem/cem97/cem9735.html>

15. van der Werf-Davelaar, T. (1999). 'Long-term Preservation of Electronic Publications; the NEDLIB Project'. D-Lib Magazine 5 (9).

<http://www.dlib.org/dlib/september99/vanderwerf/09vanderwerf.html>

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Outreach

The following are a few examples of outreach activities and are indicative of the wide range of mechanisms which can be used in this context:

1. Feeney, M. (ed). (1999). Digitising Culture: maximising the nation's investment. The National Preservation Office, London.

Also available online at:

<http://www.bl.uk/npo/>

The JISC/NPO Digital Archiving Working Group commissioned this publication as a means of making the series of commissioned reports on various aspects of digital preservation more readily accessible to a larger audience.

2. National Library of Canada. Consultation on Online Publications. January 31 2000.

<http://www.collectionscanada.ca/8/7/index-e.html>

A Consultation on Online Publications was hosted by the National Library of Canada in January 2000 with the purpose of identifying and addressing issues with respect to acquisition, preservation and provision of access to online publications.

Update 26 September 2007

This document has been archived with a note that ".. information may be out of date and some functionality lost."

Archived location

http://epe.lac-bac.gc.ca/100/206/301/lac-bac/consultation_online_publications-ef/8/7/index-e.html

3. Arts and Humanities Data Service (AHDS) website. Managing Digital Collections.

<http://www.ahds.ac.uk/about/publications/index.htm>

The AHDS invests significant effort in a range of publications and training activities designed to raise awareness of digital preservation issues and provide practical advice to data creators and potential future depositors.

4. Preserving Access to Digital Information (PADI) website.

<http://www.nla.gov.au/padi>

5. Public Record Office. EROS (Electronic Records in Office Systems) programme.

<http://www.pro.gov.uk/recordsmanagement/eros>

Update 26 November 2004

The EROS project has now ended. This redirected page contains links to relevant guidance:

<http://www.nationalarchives.gov.uk/recordsmanagement/>

The Public Record Office promotes information about its EROS programme via its website and also has a dedicated staff team specifically for outreach activities to government departments.

6. Into the Future: On the Preservation of Knowledge in the Electronic Age

<http://www.clir.org/pubs/film/film.html>

The Council for Library and Information Resources (CLIR) and the American Council of Learned Societies produced a film on the subject of digital preservation, Into the Future: On the Preservation of Knowledge on the Electronic Age, as well as an accompanying discussion guide and a compendium of other resources. The purpose was to inform a variety of communities about issues of preservation in the electronic age, to articulate what might be at stake for

society, and to point to ways that individuals and groups can work together to find solutions to the challenges posed.

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Third Party Services

Digital reformatting

1. RLG tools for beginning digital reformatting projects (1998)

<http://www.rlg.org/preserv/RLGtools.html>

Includes Worksheet for Estimating Digital Reformatting Costs; RLG Guidelines for Creating a Proposal for Digital Imaging; RLG Model Request for Information (RFI); RLG Model Request for Proposal (RFP).

2. Higher Education Digitisation Service (HEDS).

<http://www.heds-digital.com/>

HEDS provides a host of information on their website and also undertake consultancy services for digitisation projects.

Data recovery

1. Ross, Seamus and Gow, Ann. (1999). Digital Archaeology: Rescuing Neglected and Damaged Data Resources.

<http://www.hatii.arts.gla.ac.uk/research/BrLibrary/rosgowrt.pdf> Appendix 3 refers to a list of Data Recovery companies

Tendering for digital storage systems

1. National Library of Australia. Digital Services Project. Request for Tender - Digital Collection Management System.

<http://www.nla.gov.au/dsp/rft>

Update 18 December 2008

Disabled as no longer available

The NLA does not propose this as a model but it is very instructive to any other organisation contemplating developing the infrastructure for managing and preserving digital collections. The Draft Contract at Attachment 1 clearly includes elements specific to Australian Government requirements but also includes many generic elements applicable to similar organisations in any country.

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Rights Management

1. Arts and Humanities Data Service. Rights Management Framework.

<http://www.ahds.ac.uk/depositing/index.htm>

A rights management framework for the AHDS which incorporates model agreements for depositors and users to access data.

2. Beagrie, N. and Greenstein, D. (1998). Managing Digital Collections: AHDS Policies, Standards and Practices. Consultation draft. Version 1. 15 December 1998.

<http://www.ahds.ac.uk/about/publications/index.htm>

A handbook of AHDS policies, standards and practices including procedures for the administration of the rights management framework.

3. Book Industry Communication, The Rights Decision Tree, Sally Morris and the Rights Metadata Working Party.

<http://www.bic.org.uk/righttree.rtf>

Update 29 September 2008

No longer available online

A model decision tree developed for publishers to administer permissions. Although not encompassing digital preservation, it provides a useful guide to the concerns of and procedures followed by publishers.

4. Essex Data Archive, Guide to Depositing Data.

<http://www.data-archive.ac.uk/depositingData/introduction.asp>

A guide and forms for depositors with the Essex Data Archive. This includes a pro forma licence agreement.

Update 14 June 2005

The Guide to Depositing Data has now been moved onto the Economic and Social Data Service web site, please use the following link to access the relevant sections:

<http://www.data-archive.ac.uk/aboutdata/create.asp>

Update 12 December 2006

New location

<http://www.esds.ac.uk/aandp/create/depintro.asp>

Update 19 October 2009

New location

<http://www.esds.ac.uk/aandp/create/storeguideesrc.asp>

5. National Library of Australia. Voluntary Deposit Scheme for Physical Format Electronic Publications.

<http://www.nla.gov.au/policy/vdelec.html>

A guide to the Voluntary Deposit Scheme for Physical Format Electronic Publications in Australia. This includes a pro forma deposit deed.

Update 27 January 2006

This page has actually been removed from the site and the information will be incorporated into the following page: <http://www.nla.gov.au/policy/cdrom.html> - Use of Australian CD-ROMs & Other Electronic Materials Acquired by Deposit

6. Seville, C. and Weinberger, E. Intellectual Property Rights lessons from the CEDARS project for digital preservation. Eighth draft, 1 June 2000

<http://www.leeds.ac.uk/cedars/contentpub.htm>

A draft guide being developed by the CEDARS project.

7. LIBLICENSE. Licensing Digital Information. A Resource for Librarians.

<http://www.library.yale.edu/~llicense/index.shtml> or UK mirror site:

<http://mirrored.ukoln.ac.uk/lib-license/index.shtml> Web pages and discussion lists to assist librarians in negotiating licence agreements. Includes many model licences and publishers' agreements.

8. AHDS and TASI, Copyright FAQ.

http://www.tasi.ac.uk/advice/managing/copyright_faq.html

9. Bide, M. et al. (1999). Digital Preservation: an introduction to standards issues surrounding the deposit of non-print publications.

<http://www.bic.org.uk/digpres.doc>

Update 29 September 2008

Link no longer valid - new location:

<http://www.bic.org.uk/files/pdfs/digpres.pdf>

10. Koelman, K. J. et al. (1998). Copyright Aspects of the Preservation of Electronic Publications. Instituut voor Informatierecht Report 7.

<http://www.ivir.nl/Publicaties/koelman/KBeng2.doc>

11. Lyons, P. (ed). (1998). The JISC/TLTP Copyright Guidelines. (ISBN 1 900508 41 9)

<http://www.ukoln.ac.uk/services/elib/papers/other>

12. PADI Website. Rights Management.

<http://www.nla.gov.au/padi/topics/28.html>

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Staff Training and Development

1. Arts and Humanities Data Service. User Support and Training page.

<http://ahds.ac.uk/users.htm>

2. Edwards, C. (1997). 'Change and Uncertainty in Academic Libraries.' Ariadne, Issue 11.

<http://www.ariadne.ac.uk/issue11/main>

3. Garrod, P. (1998). 'Skip (Skills for new Information Professionals).' Ariadne, Issue 16.

<http://www.ariadne.ac.uk/issue16/skip/intro.html>

4. Jefcoate, G. (1997). 'Training for a national library website: the experience of the British Library.' Gabriel workshop, session V - Human Resources and Training.

http://www.bl.uk/gabriel/about_gabriel/workshops/contents/1997/ses5-gj.htm

Update 14 June 2005

Gabriel has ceased as a project and this page is no longer available.

5. Public Record Office. (1999). Human Resources in Records Management. Kew: Public Record Office.

http://www.nationalarchives.gov.uk/recordsmanagement/advice/pdf/best_human_resources.pdf

Update 03 November 2006

Link broken. New location

http://www.nationalarchives.gov.uk/documents/best_human_resources.pdf

6. Ross, S., Moss, M. and Richmond, L. (1998). 'Planning and Designing a Programme of Digital Preservation Studies'. In Electronic Access:Archives in the New Millenium. Kew: Public Record Office. pp102-110.

7. SKIP (Skills for New Information Professionals) Project. Final Report. 1998.

<http://www.ukoln.ac.uk/services/elib/papers/other/skip/finalpt2.html>

8. Wettengel, M. (1998). 'Core Competencies for Electronic Record Keeping'. In Electronic Access:Archives in the New Millenium. Kew: Public Record Office. pp.96-101.

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Standards and Best Practice Guidelines

1. Arts and Humanities Data Service. Guides to Good Practice.

<http://www.ahds.ac.uk/creating/guides/index.htm>

2. Beagrie, N. and Greenstein, D. (1998). Managing Digital Collections:AHDS Policies, Standards and Practices. Consultation draft.Version 1. 15 December 1998.

<http://www.ahds.ac.uk/about/publications/index.htm>

3. DLM Forum. (1997). Guidelines on Best Practice for Using Electronic Information.

<http://europa.eu.int/ISPO/dlm/documents/gdlines.pdf>

Update 19 March 2008

No longer available - information at

<http://ec.europa.eu/archives/ISPO/dlm/>

4. Gatenby, P. (2000). 'Digital Archiving - Developing Policy and Best Practice Guidelines at the National Library of Australia.' Paper presented at an interactive Workshop on Digital Archiving sponsored by ICSTI and ICSU Press, 30-31 January 2000. UNESCO House, Paris

<http://www.icsti.org/2000workshop/gatenby.html>

Update 23 May 2008

URL no longer available - link disabled

5. NOF-digitise Technical Standards and Guidelines.Version One; June 2000.

<http://www.peoplesnetwork.gov.uk/content/technical.asp>

Update 27 January 2006

This link no longer active. Version One and later versions available at:

[http://www.mla.gov.uk/webdav/harmonise?Page/@id=73&Document/@id=18612&Section\[@stateId_eq_left_hand_root\]/@id=4332](http://www.mla.gov.uk/webdav/harmonise?Page/@id=73&Document/@id=18612&Section[@stateId_eq_left_hand_root]/@id=4332)

Update 18 December 2008

No longer available

6. Reference Model for an Open Archival Information System (OAIS) Draft Recommendation for Space Data Systems (CCSDS), CCSDS 650.0-R-1, May 1999.
<http://www.ccsds.org/documents/650x0b1.pdf>

Update 27 January 2006

The draft OAIS recommendation is no longer available, the full specification (2002) can be found at: <http://public.ccsds.org/publications/archive/650x0b1.pdf>

It is also instructive to look at responses to the draft OAIS model from the perspective of deposit libraries which have reviewed or implemented it. See, for example the National Library of Australia's response at:

<http://www.nla.gov.au/wgroups/oais>

NEDLIB contribution to the review of OAIS is at:

<http://www.kb.nl/coop/nedlib/results/OAISreviewbyNEDLIB.html>

Update 11 August 2006

New location <http://nedlib.kb.nl/results/OAISreviewbyNEDLIB.html>

7. PADI Website. Data Documentation & Standards.
<http://www.nla.gov.au/padi/topics/29.html>
8. Public Record Office. (1999). Management, Appraisal and Preservation of Electronic Records. Volume 1, Principles & Volume 2, Procedures.
<http://www.nationalarchives.gov.uk/electronicrecords/advice/guidelines.htm>
9. Public Record Office Victoria (Australia). (2000). Standard for the Management of Electronic Records in the Victorian Government. Version 1.0, April 2000. (PROS 99/007).
<http://www.prov.vic.gov.au/vers/standards/pros9907/99-7toc.htm>

Update 26 November 2004

Version 2 now available: Management of Electronic Records PROS 99/007 (Version 2)

<http://www.prov.vic.gov.au/vers/standard/version2.asp>

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Costs and Business Modelling

These sources are quite different from the costs referred to in section 4 which indicate the cost of creating digital surrogates. The costs here relate to the development of life cycle costing and

maintaining digital materials in the long term.

Costs and models

1. LIFE : Life Cycle Information for E-Literature *

<http://www.life.ac.uk/>

This project has been launched to examine key stages of digital library material life cycles which will then be costed to show the financial commitment required to maintain the materials in the long term. It is being conducted by the University College London (UCL) Library Services and the British Library is funded by the Joint Information Systems Committee (JISC). The project is expected to present findings in early 2006.

2. Rusbridge, Chris. (2006). Excuse Me : Some Digital Preservation Fallacies. Ariadne 46 Jan. 2006

<http://www.ariadne.ac.uk/issue46/rusbridge/>

Rusbridge makes the point that all preservation is expensive and there is a logical argument to suggest that digital preservation will be cheaper than preservation of print materials. His conclusion emphasises that repositories need to make conscious and responsible decisions when allocating resources for digital preservation actions.

3. Lavoie, Brian F. (2003) Incentives to Preserve Digital Material: Roles, Scenarios and Economic Decision-Making

<http://www.oclc.org/research/projects/digipres/incentives-dp.pdf>

"Economics is, fundamentally, about incentives, so a study of the economics of digital preservation should begin with an examination of the incentives to preserve." This concept is key in this paper which convincingly argues the case for influencing the key economic decision-makers to see the case for preservation in order to sustain funding for digital collections.

4. espida *

<http://www.gla.ac.uk/espida/>

This project of the University of Glasgow is developing a sustainable business focussed model for digital preservation at an HE/FE institution. The project agrees very much with the intention of Lavoie in the previous article that the key to sustained funding for digital preservation lies in creating an incentive in the mind of the key stakeholders by proving the value of the investment in digital preservation. They are developing an approach based on an economic model, the model scorecard approach. The final results are expected in September 2006.

Currall, J., Johnson, C., McKinney, P., (2005) 'The Organ Grinder and the Monkey. Making a business case for sustainable digital preservation', Paper given at EU DLM Forum Conference 5-7 October 2005 Budapest, Hungary. <http://www.gla.ac.uk/espida/documents/dlm%20forum%202005.pdf>

A paper discussing the reasoning behind the espida project.

5. Chapman, S. (2003) Counting the Costs of Digital Preservation: Is Repository Storage Affordable? *Journal of Digital Information* 4, (2), 208-214

<http://jodi.ecs.soton.ac.uk/Articles/v04/i02/Chapman/chapman-final.pdf>

This is a very interesting discussion of the costs of digital versus analog storage, however it is discussed in isolation from any other issues so the results should not be taken out of context.

Update 10 August 2007

No longer available online.

6. Marley, S., Moore, M., Clark, B. (2003) Building a Cost-Effective Remote data Storage Capabilities for NASA's EOSDIS. Paper presented at the Twentieth IEEE/Eleventh NASA Goddard Conference on Mass Storage Systems & Technologies April 7-10, San Diego
<http://storageconference.org/STORAGECONFERENCE/2003/presentations/B05-Marley.pdf>

This article contains a detailed discussion of a data system cost model and cost sources. They reach the conclusion that staffing is the major cost factor involved and facilities costs will remain insignificant at only 5-10% of total cost of ownership.

Update 19 October 2009

Link broken. New location

<http://storageconference.org/2003/presentations/B05-Marley.pdf>

7. Schonfeld, R., King, D.W., Okerson, A., Fenton, E. G., (2004) Library Periodicals Expenses: Comparison of Non-Subscription Costs of Print and Electronic Formats on a Life-Cycle Basis, *D-Lib Magazine* Jan. 2004

<http://www.dlib.org/dlib/january04/schonfeld/01schonfeld.html>

This article analyses some of the costs in the life cycle of digital periodicals in 11 academic libraries.

8. Connaway, L., Lawrence, S. (2003) Comparing Library Resource Allocations for the Paper and Digital Library: An Exploratory Study *D-Lib* 9, (12)

<http://www.dlib.org/dlib/december03/connaway/12connaway.html>

This is an interesting discussion of cost sources in research libraries, the main aim however was to compare the costs of managing traditional and digital library materials.

9. Deegan, M., Tanner, S. (2003) Exploring Charging Models for Digital Cultural Heritage. *In: Ariadne* 14 Jan 2003

<http://www.ariadne.ac.uk/issue34/tanner/>

While not directly about digital preservation, this article does discuss some interesting aspects of costs of the digital life cycle of photographic services in cultural heritage institutions.

10. Kol, N., Oltmans, E. (2005) [Comparison Between Migration and Emulation in Terms of Costs](#). *RLG DigiNews* (15 Apr 2005) *

http://www.rlg.org/en/page.php?Page_ID=20571#article0

This article compares projections for the total life cycle costs when implementing emulation or migration as a preservation strategy, and gives examples from the National Library of the Netherlands digital repository.

11. Ashley, K. (1999). 'Digital Archive Costs: Facts and Fallacies.' *DLM Forum* '99

http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm

Update 19 March 2008

No longer available - information at

<http://ec.europa.eu/archives/ISPO/dlm/>

Two extremes of models are explored from the "basic safety deposit" model, in which data are deposited, but not expected to be accessed other than by the depositor, to a more comprehensive service. The latter is assumed to be the most common model and nine potential service elements are identified to provide assistance to archives in evaluating their major cost influences. There is also an indication of what factors will increase costs. In general, the simpler it is to acquire material (for example, one large file v many small ones, a restricted number of file formats v no control over deposited material, etc.), the easier it will be to reduce costs. The experience of the University of London Computing Centre is that staff account for 70% of total costs and the next greatest cost is capital and maintenance costs for hardware and software associated with access (as opposed to data preservation).

* These and other projects and findings are also included in the report from the DCC/DPC Workshop on Cost Models, held at the British Library on 26 July 2005. The report and links to the presentations are available from [here](#) .

Tools

General

1. [CEDARS Guide to Digital Collection Management](#) , Section 5. Costs: Processes and People pp.19-21

<http://www.leeds.ac.uk/cedars/guideto/collmanagement/>

2. ERPANET (2003) Cost Orientation Tool

<http://www.erpanet.org/www/products/tools/ERPANETCostingTool.pdf>

This tool provides a general discussion of the cost factors and need to develop costs and benefits for digital preservation efforts.

Update 27 November 2006

Link broken. New location

<http://www.erpanet.org/guidance/docs/ERPANETCostingTool.pdf>

3. Hendley, T. (1998). Comparison of Methods and Costs of Digital Preservation. British Library Research and Innovation Report 109. London: the British Library.

<http://www.ukoln.ac.uk/services/elib/papers/tavistock/hendley/hendley.html>

One of seven JISC/NPO commissioned reports which investigated various aspects of digital preservation. The terms of reference for this report were:

1. To draw up a matrix of data types and categories of digital resources.
2. To draw up a decision model for assessing the agreed categories of digital resources to determine the most appropriate method of long-term preservation.
3. To draw up a cost model for comparing the costs of the preferred methods of preservation

for each category of digital resource.

Chapter 5 describes a cost model using the seven modules proposed by Beagrie and Greenstein (data creation; data selection and evaluation; data management; resource disclosure; data use; data preservation; rights management). These are first analysed to identify generic cost elements and then applied in more detail to four categories of digital resources (data sets; structured texts; office documents; visual images).

4. Office of Government Commerce (2004) Life Cycle Costing. Office of Government Commerce Successful Delivery toolkit:

<http://www.ogc.gov.uk/sdtoolkit/deliveryteam/briefings/businesschange/PDFs/lifecyclecosting.pdf>

A brief, generic but useful description of life cycle costing.

Records

1. Testbed Digitale Bewaring (2005) Costs of Digital Preservation

<http://www.digitaleduurzaamheid.nl/bibliotheek/docs/CoDPv1.pdf>

This paper presents a tool for assessing digital preservation costs for archived records. The digital material lifecycle is comparable to the "records continuum" discussed here. The cost model developed by this project is discussed in detail. The cost model is used to evaluate and compare costs of various preservation strategies and several record types, such as email, text, spreadsheets and databases.

2. Sanett, S. (2003) Cost to Preserve Authentic Electronic Records in Perpetuity: Comparing Costs Across Cost Models and Cost Frameworks In: [RLG DigiNews](http://www.rlg.org/legacy/preserv/diginews/diginews7-4.html#feature2) (Date Created: 15 Aug 2003)

This article suggests a method of comparing various cost models and frameworks to obtain the most appropriate for a specific purpose and enable selection of the most appropriate preservation strategy.

E-prints

1. James, H., Ruusalepp, R., Anderson, S., Pinfield, S. (2003) Feasibility and Requirements Study on Preservation of E-Prints. Report Commissioned by the Joint Information Systems Committee, pp.41-44

http://www.jisc.ac.uk/uploaded_documents/e-prints_report_final.pdf

Chapter 9 is dedicated to Cost Models for Preserving E-Prints as they currently exist and suggests they are one of the simplest and least expensive types of digital archives to develop and manage because E-Prints are still generally simple by nature. It discusses cost events and

states the most significant cost elements in E-Print Archives are: negotiating rights, managing proprietary formats and creating additional metadata.

Data sets

1. Griffin, V.L., Fontaine, K.S., Hunolt, G., Torrealba, D (2002) Cost estimation tool set for NASA's strategic evolution of ESE data systems. Paper presented at the CNES Symposium "Ensuring Long-Term Preservation and Adding Value to Scientific and Technical Data"; November 5-7, 2002.

http://sads.cnes.fr:8010/pvdst/DATA/5-8_griffin.pdf

This paper discusses a complex tool developed at NASA for estimating the cost of proposed data systems. The tool is based on "costing by analogy" which implements a method of comparing the proposed system to other similar past systems and is likely to be relevant to similarly large data archives.

Repository design

1. Crespo, A., Garcia-Molina, H. (2001) Cost-Driven Design for Archival Repositories. Presented at the Joint Conference on Digital Libraries 2001 (JCDL'01); June 24-28, 2001; Roanoke, Virginia, USA. <http://www-db.stanford.edu/~crespo/publications/cost.pdf>

This paper presents a method of modelling possible archival repository design to assess which will be the best configuration for reliability and cost factors.