

## The Handbook

Digital information is increasingly important to our culture, knowledge base and economy. The Handbook was first compiled by Neil Beagrie and Maggie Jones and is now maintained and updated by the DPC. The handbook provides an internationally authoritative and practical guide to the subject of managing digital resources over time and the issues in sustaining access to them. It will be of interest to all those involved in the creation and management of digital materials.

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Introduction

**Digital Preservation** 

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Media and Formats

The Preservation Management of Digital Material Handbook is maintained by the Digital Preservation Coalition in collaboration with the National Library of Australia and the PADI Gateway.



The Handbook was first compiled by Neil Beagrie and Maggie Jones and is now maintained and updated by the DPC.



www.dpconline.org/graphics/handbook/

### **Reviews**



Digital information is increasingly important to our culture, knowledge base and economy. The Handbook was first compiled by Neil Beagrie and Maggie Jones and is now maintained and updated by the DPC. The handbook provides an internationally authoritative and practical guide to the subject of managing digital resources over time and the issues in sustaining access to them. It will be of interest to all those involved in the creation and management of digital materials.

#### Notice

The hardcopy version of the Handbook of Digital Preservation is now out of print. The online version of the Handbook is being maintained and updated by the DPC and is freely available.

### **Endorsements and Reviews of the Handbook**

Preservation Management of Digital Materials; A Handbook is the best example yet of turning discussion into action.
Holding The Past In Our Digital Future by Christopher Phipps, The Times Higher, 11th October 2002
To read the full article in The Times Higher please <u>click here</u> (Times Higher subscribers only)

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Digital Preservation Coalition November 2008 Website: <u>www.dpconline.org</u> Email: <u>info@dpconline.org</u>



"If you are in any doubt of the need for digital preservation, read this handbook. If you need education on the place of digital preservation in the larger scheme of access and management, and on the many issues it raises, use this handbook. And if you want a usable source of definitive references on just about every aspect of digital preservation, pop a copy of this handbook on your shelf. "

Marc Fresko EDM & ERM Consulting Services Director, Cornwell Affiliates plc in Managing Information

for full review click here

#### Update 13 May 2008

Link removed as no longer available.

"For some years, Neil Beagrie and Maggie Jones have quietly been making an outstanding contribution to the development of digital preservation - on both sides of the global e-village. This publication amply demonstrates their skills at bringing together the best information, analysing it and synthesising it to produce practical advice, and adding their own highly valued ideas. This is the big picture, close up and intimate."

Colin Webb, Director Preservation Services, National Library of Australia

"The ever-increasing range of digital information is bringing new challenges in terms of understanding and managing the digital lifecycle, and the preservation of electronic resources will be just as important to our future as the existing great collections of our archives, libraries, and museums. It is impossible to imagine how generations to come will gain insight into our society and our lives without getting access to that growing range of resources. Preservation Management of Digital Materials is an essential tool both to raise awareness of the risks we run if we do not take digital preservation seriously and to give a sense of direction for those directly involved in the digital lifecycle."

Chris Batt, Director of Learning and Information Society, Resource: The Council for Museums, Archives and Libraries

"This publication represents a significant step on the road from 'talking' to 'doing' in the area of digital preservation. It is a clear, authoritative, up to date and pragmatic handbook, drawing on the extensive practical experience of the authors."

Helen Shenton, Chair Digital Library System Project, British Library

"This will undoubtedly become a key reference text on all aspects of digital preservation" Alison Horsburgh, National Archives of Scotland

"All institutions will greatly benefit from its practical approach, the thorough treatment of the subject and the numerous references on different issues of digital preservation." **Dr.Michael Wettengel, Germany** 

"Over the past few years the U.K. has been a hot spot for digital preservation activity. With the publication of Preservation Management of Digital Materials, Maggie Jones and Neil Beagrie have provided some of the most pragmatic information available today to assist cultural institutions in addressing digital preservation threats. It not only offers vetted guidance on available resources, but encourages the reader to think carefully about the issues, through a combination of case studies, commentary, checklists, and decision trees." **Anne Kenney Associate Director, Department of Preservation, Cornell University, USA** 



## **Change History of the Handbook**

Please note all url links from the electronic edition of the Handbook are checked weekly by robot software to identify broken links and resources which have been moved from their original web location. Individual url changes are part of our routine maintenance and updating but are not noted below except in cases where newer versions of documents are available.

Table of Changes made to the Handbook	
DATE	CHANGES
October 2008	Organisational Activities: Exemplars and Further Reading
	http://www.columbia.edu/cu/libraries/digital/criteria.html no longer valid - disabled
September 2008	Institutional Strategies: Exemplars and Further Reading
	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 URl no longer valid, updated with new location.
	Book Industry Communication, The Rights Decision Tree, Sally Morris and the Rights Metadata Working Party. http://www.bic.org.uk/rightree.rtf no longer available - disabled
May 2008	Institutional Strategies: Exemplars and Further Reading
	URLs http://www.icsti.org/2000workshop/gatenby.html and http://www.icsti.org/2000workshop/index.html no longer available - disabled
	A Handbook: Endorsements and Reviews of the Handbook
	Link to "Marc Fresko EDM & ERM Consulting Services Director, Cornwell Affiliates plc in Managing Information" removed as no longer available.
	Organisational Activities: Exemplars and Further Reading
	OTA: Creating and Documenting Electronic Texts. Chapter 6: Documentation and Metadata. http://ota.ahds.ac.uk/documents/creating/chap6.html.
	New location http://ota.oucs.ox.ac.uk/documents/creating/cdet/chap6.html
April 2008	Organisational Activities: Exemplars and Further Reading
	Archaeology Data Service, Guidelines for Depositors Version 1.1 http://ads.ahds.ac.uk/project/userinfo/deposit.html no longer available. Link added to Version 1.3 at

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Introduction         Mailing address amended to         Digital Preservation Coalition         Innovation Centre         York         YO10 5DG         Digital Preservation - References         Links to http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm and         http://europa.eu.int/ISPO/dlm/were disabled and a new URL for         information added http://ec.europa.eu/archives/ISPO/dlm/         March 2008       The following URLs were disabled and a new URL for information added         http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm in Institutional         Strategies - Costs and business modelling, Institutional Strategies -         Exemplars and Further Reading         http://europa.eu.int/ISPO/dlm/doluments/gdlines.pdf in Institutional         Strategies - References, Institutional Strategies - Exemplars and Further         Reading, Institutional Strategies - Standards and Best Practice Guidelines,         Media and Formats - Exemplars and Further Reading, Organisational         Activities - Exemplars and Further Reading, Organisational         Activities - References (2 instances), Organisational Activities - Creating         Electronic Records         November 2007       Organisation Activities: Exemplars and Further Reading         Organisational Activities: Exemplars and Further Reading         Organisational Activities: Exemplars and Further Reading <th></th> <th>http://ads.ahds.ac.uk/project/userinfo/deposit.cfm</th>		http://ads.ahds.ac.uk/project/userinfo/deposit.cfm
Digital Preservation Coalition Innovation Centre York Science Park York YO10 5DGDigital Preservation - ReferencesLinks to http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm and http://europa.eu.int/ISPO/dlm/ were disabled and a new URL for information added http://ee.europa.eu/archives/ISPO/dlm/March 2008The following URLs were disabled and a new URL for information added http://ee.europa.eu/archives/ISPO/dlm/March 2008The following URLs were disabled and a new URL for information added http://ee.europa.eu/archives/ISPO/dlm/March 2008The following URLs were disabled and a new URL for information added http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm in Institutional Strategies - Costs and business modelling, Institutional Strategies - Exemplars and Further Reading http://europa.eu.int/ISPO/dlm/documents/gdlines.pdf in Institutional Strategies - References, Institutional Strategies - Exemplars and Further Reading, Institutional Strategies - Standards and Best Practice Guidelines, Media and Formats - Exemplars and Further Reading, Organisational Activities - Exemplars and Further Reading (3 instances), Organisational Activities - Exemplars and Further Reading (3 instances), Organisational Activities - References (2 instances), Organisational Activities - Creating Electronic RecordsNovember 2007Organisational Activities: Exemplars and Further Reading Organisational Activities: Exemplars and Further Reading Instituti		Introduction
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Strategies – References, Institutional Strategies - Exemplars and Further Reading, Institutional Strategies - Standards and Best Practice Guidelines, Media and Formats - Exemplars and Further Reading, Organisational Activities - Exemplars and Further Reading (3 instances), Organisational Activities – References (2 instances), Organisational Activities - Creating Electronic RecordsNovember 2007Organisational Activities: Exemplars and Further Reading Organisation Activities: References Link to " Tanner, S. and Lomax-Smith, J. (1999).'How Much Does It Really Cost?' Paper for DRH '99 Conference." as no longer available online.October 2007Institutional Strategies: Exemplars and Further Reading Organisational Activities: Exemplars and Further Reading RLG/OCLC link updatedSeptember 2007Institutional Strategies: Exemplars and Further Reading Links to "National Library of Canada. Consultation on Online Publications. (January 31 2000)" updated to archived location.	March 2008	http://ec.europa.eu/archives/ISPO/dlm/: http://europa.eu.int/ISPO/dlm/fulltext/full_ashl_en.htm in <i>Institutional</i> <i>Strategies - Costs and business modelling, Institutional Strategies -</i>
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	Links to "National Archives of Australia. Recordkeeping Metadata Standard for Commonwealth Agencies. May 1999" removed as no longer available.
	Digital Preservation: References
	Guidance on Completion of the Decision Tree
	Organisational Activities: Exemplars and Further Reading
	Organisation Activities: References
	the link to http://www.nlc-bnc.ca/9/8/index-e.html has been updated
August 2007	Institutional Strategies: Exemplars and Further Reading
	Link to " Chapman, S. (2003) Counting the Costs of Digital Preservation: Is Repository Storage Affordable? Journal of Digital Information 4, (2),
	208-214" disabled as no longer available online.
May 2007	Organisation Activities: References
	Links to "E-government: a strategic framework for public services in the Information Age." and "British Standards Institute. (1999). Information Security Management (BS7799-2: 1999)" disabled as obsolete.
March 2007	Organisational Activities: Exemplars and Further Reading
	Organisation Activities: References
	Organisational Activities: Creating Electronic Records
	Link to "Electronic Records Management: Framework for Information Age Government. April 2000" (rtf) replaced with link to PDF
	Organisational Activities: Exemplars and Further Reading
	Link to "ECUP (European Copyright User Platform) Licensing Issues" removed as no longer available.
	Introduction: Acronyms and Initials
	Link to "ECUP European Copyright User Platform" removed as no longer available.
February 2007	Introduction: Acronyms and Initials
	New URL for PADS
December 2006	Institutional Strategies: Exemplars and Further Reading
	Link to "Essex Data Archive, Guide to Depositing Data. A guide and forms for depositors with the Essex Data Archive. This includes a pro forma licence agreement." updated.

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	Organisational Activities: Exemplars and Further Reading
	Link to "National Archive of New Zealand. (1998). Appraisal Standard, Standard for the Appraisal of Public Records and Archives.Wellington, 1998." PDF updated.
November 2006	Institutional Strategies: Exemplars and Further Reading
	Link to "http://www.nationalarchives.gov.uk/recordsmanagement/advice/
	pdf/best_human_resources.pdf " (Human Resources in Records Management. Kew: Public Record Office.) disabled and new link added.
	Link to "http://www.erpanet.org/www/products/tools/ERPANETCostingTool.pdf " disabled and new link added.
	Institutional Strategies: costs and business modelling
	Link to "http://www.erpanet.org/www/products/tools/ERPANETCostingTool.pdf" disabled and new link added.
October 2006	Digital Preservation: References
	Hedstrom, M. and Montgomery, S. (1998). Digital Preservation Needs and Requirements in RLG Member Institutions. Link updates
	Location of Catriona II Project report updated.
August 2006	Introduction: Acronyms and Initials
	PRO Public Record Office - information added and link updated
	TNA added
	EROS Electronic Records in Office Systems - information added and link updated
	NDAD UK National Digital Archive of Datasets - link updated
August 2006	Organisation Activities: References
	Three links to http://www.pro.gov.uk/recordsmanagement/eros/guidelines disabled - the EROS project has now ended. Link to a page with links to relevant guidance added.
	Link to "A Model Action Plan for Developing Records Management Compliant with the Lord Chancellor's Code of Practice under section 46 of the Freedom of Information Act 2000" updated.
August 2006	Media and Formats: Exemplars and Further Reading
	Links for "Dale, R. (1999). File compression Strategies Discussion at

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	ALA. RLG DigiNews February 15 1999." and "Frey, F. (2000). File Formats for Digital Masters." updated.
August 2006	Intro: Acronyms
	Link for "Research Libraries Group" updated.
August 2006	Decision Tree: End Page
	Link to "British Library Digital Preservation Policy, November 2002" updated.
July 2006	Organisational Activities: References
	Links for "Arms, C. (2000).'Keeping Memory Alive: Practices for Preserving Digital Content at the National Digital Library Program of the Library of Congress.' RLG DigiNews.Volume 4 (3). June 15 2000. p. 5." and "'Risk Management of Digital Information: a File Format Investigation'. RLG DigiNews 4 (3). 15 June 2000. p.14" updated.
March 2006	A new section 3.7 Costs and Business Modelling added to Institutional Strategies
	New sub-section Costs and Business Modelling added to Institutional Strategies: Exemplars and Further Reading
	Sub-section How much does it cost? updated in Digital Preservation: Strategic Overview
	Sub-section Costs updated in Digital Preservation: Preservation Issues: Organisational Issues
	<i>Costs of maintaining Digital Archives</i> removed from <i>Organisational Activities: Exemplars and further reading: Digitisation Costs</i> (renamed from <i>Costs</i> to <i>Digitisation Costs</i> ) as this subject now covered by updates and new section as detailed above.
March 2006	The <i>Decision Tree</i> has been updated and replaces the old Figure 4. The new version can be found at <i>Decision Tree</i>
	The following pages have had links to the <i>Decision Tree</i> added or updated:
	Handbook section Home Page
	4. Organisational Activities: 4.2.1 Appraisal and Selection
	4. Organisational Activities: 4.2.2 Retention and Review
	Figure 4 in the list of figures now links to the PDF of the Decision Tree
January 2006	Introduction
	Link to http://www.icpsr.umich.edu/DDI/users/dtd/index.html (DDI Data

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	Documentation Initiative) disabled and new link added.
January 2006	Institutional Strategies: Exemplars and Further Reading
	Link to "http://www.nla.gov.au/policy/vdelec.html" (National Library of Australia.Voluntary Deposit Scheme for Physical Format Electronic Publications.) disabled and new link added.
January 2006	Institutional Strategies: Exemplars and Further Reading
	Organisational Activities: Exemplars and Further Reading
	Links to "NOF-digitise Technical Standards and Guidelines.Version One; June 2000." disabled and links to a page with newer versions added.
	Links to "Reference Model for an Open Archival Information System (OAIS)Draft Recommendation for Space Data System" disabled and alternative links added.
September 2005	Organisational Activities: Exemplars and Further Reading
	Link to "http://www.nof-digitise.org" (New Opportunities Fund) disabled and link to new page added.
June 2005	Institutional Strategies: Exemplars and Further Reading
	Link to "Jefcoate, G. (1997).'Training for a national library website: the experience of the British Library.' Gabriel workshop, session V - Human Resources and Training." disabled as Gabriel has cease as a project and the page is no longer available.
	Link to "Essex Data Archive, Guide to Depositing Data. A guide and forms for depositors with the Essex Data Archive. This includes a pro forma licence agreement." disabled - and link to new page added.
April 2005	Institutional Strategies: Exemplars and Further Reading
	Organisational Activities: Exemplars and Further Reading
	Three links to "NOF-digitise Technical Standards and Guidelines.Version One; June 2000." disabled and links to a page with newer versions added.
February 2005	Organisational Activities: References
	Link to "A striking example of the potential pitfalls of reliance of converting email to paper can be found in the PROFS case involving the National Archives and Records Administration in the USA." disabled as the document is no longer accessible. A link to a document with information on PROFS was added.
January 2005	Organisational Activities: Exemplars and Further Reading
	Link to "Public Record Office (UK). (1999). Electronic Records from

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	Office Systems Project (EROS). Series of guides on management, appraisal and preservation of electronic records in government. Kew, Surrey, 1999." disabled - the EROS project has now ended. Link to a page with links to relevant guidance added.
December 2004	Organisational Activities: Exemplars and Further Reading
	Link to "Reference Model for an Open Archival Information System (OAIS) Draft Recommendation for Space Data System Standard. May 1999." replaced by link to a page from which the document is accessible as either a pdf or word document. (Two instances).
	Link to http://www.hcu.ox.ac.uk disabled as HCU no longer in existence.
November 2004	Institutional Strategies: Exemplars and Further Reading
	Link to "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)" disabled and link to Version 2 added.
	Link to "Public Record Office. EROS (Electronic Records in Office Systems) programme." disabled - the EROS project has now ended. Link to a page with links to relevant guidance added.
	Organisational Activities: Exemplars and Further Reading
	Link to "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)" disabled and link to Version 2 added.
	Link to "National Archive of New Zealand. (1998). Appraisal Standard, Standard for the Appraisal of Public Records and Archives.Wellington, 1998." disabled and link to PDF added.
	Link to "Electronic Records Management: Framework for Information Age Government. March 2000." disabled and link to April 2000 version added.
	Link to "Beagrie, N. and Greenstein, D. (1998). A Strategic Policy Framework for Creating and Preserving Digital Collections. Version 4.0 (Final Draft). ELib Supporting Study P3. Library Information Technology Centre, South Bank University, London." disabled and link to Version 5 added.
	Link to "Kingma, B. (1999).The Economics of Digital Access: the Early Canadiana Online Project. http://www.canadiana.org/eco/english/kingma.pdf" and link to a 2000 version of "The Costs of Print, Fiche, and Digital Access The Early

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	Canadiana Online Project" by Bruce R. Kingma added.
	Introduction: References
	Link to "Beagrie, N. and Greenstein, D. (1998). A Strategic Policy Framework for Creating and Preserving Digital Collections. Version 4.0 (Final Draft). ELib Supporting Study P3. Library Information Technology Centre, South Bank University, London." disabled and link to Version 5 added.
	Organisational Activities: Creating Electronic Records
	Link to "Electronic Records Management: Framework for Information Age Government. March 2000." disabled and link to April 2000 version added.
	Organisational Activities: References
	Link to "Electronic Records Management: Framework for Information Age Government. March 2000." disabled and link to April 2000 version added.
May 2002	Online Edition Version 1.0 developed by Neil Beagrie and Brett Scillitoe for the Digital Preservation Coalition
	All URL's checked and updated
	Web hotlinks and navigation for online edition
	Decision tree (figure 4) explanatory text added to Question 5
	Search Other Resources facility (search archives of Digital Preservation JISCmail list and search Preserving Access to Digital Information (PADI) Gateway) added to Exemplars and Further Reading sections
February 2002	Limited Edition CD produced for DPC launch at House of Commons
October 2001	Print publication published by British Library
October 2000	Pre-publication review draft on web

## **Topic Index**

Access p122, ref 2 p44, 3 p24, 4 p56 Accessioning p. 96, see also Appraisal p93; Selection p41;Transfer procedures p96 Acquisition p93 Acronyms and initials p26 Appraisal p93, see also Selection p41 Archiving, see Digital archiving Audit of data and systems p109 Authentication p24 Authenticity p24, ref 2 p37

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