

# DPC / PADI What's new in digital preservation

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This is a summary of selected recent activity in the field of digital preservation compiled from a number of resources including the [digital-preservation](#) and [padiforum-l](#) mailing lists. Additional or related items of interest may also be included.

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## **1. News from organisations and initiatives**

### **1.1 Digital Preservation Coalition (DPC)**

The winner of the 2007 Digital Preservation Awards, sponsored by the DPC, was announced by Lloyd Grossman at the prestigious Conservation Awards ceremony at the British Museum on the 27<sup>th</sup> of September 2007. The National Archives received the Award in recognition for their software tool DROID (Digital Record Object Identification) developed to perform automated batch identification of file formats and PRONOM which facilitates the capture of detailed technical information on file formats.

The shortlisted projects were: DRAMBORA; DROID and PRONOM; LIFE; PARADIGM and The Web Curator Tool software development project. All the shortlists gave a presentation of their projects at a DPC Briefing Day – DP Awards 2007 Showcase & Shaping the DPC in November 2007. Further details on the 2007 Digital Preservation Award are available from the DPC website. Retrieved 30 March 2008 from: <http://www.dpconline.org/graphics/awards/2007.html>

January saw the DPC welcome Portico and the Society of Archivists as new Associate Members, bringing its membership up to thirty.

In February the DPC published its latest 'Technology Watch Report' on 'JPEG 2000 – a Practical Digital Preservation Standard?' The report looks in-depth at the new format and the challenges it has to cope with. JPEG 2000 is widely used to collect and distribute a variety of images from geospatial, medical imaging, digital cinema, and image repositories to networked images. As interest in JPEG 2000 is growing in the archival and library sectors, institutions are looking for more efficient formats to store the results of major digitisation programmes. The report is aimed at organisations involved in the management and storage of digital information. The in-depth report will help archives, libraries and other institutions make informed decisions about JPEG 2000 format and their future storage needs. The report written by Robert Buckley, Ph.D. a Research Fellow with Xerox is available from the DPC website.

Buckley, R. (2008) *JPEG 2000 – a Practical Digital Preservation Standard?*  
Digital Preservation Coalition Technology Watch Series Report 08-01.  
Retrieved 30 March 2008 from:  
<http://www.dpconline.org/graphics/reports/index.html#jpeg2000>

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### **1.2 Digital Curation Centre (DCC)**

The third issue of the *International Journal of Digital Curation (IJDC)* is now

available. Curation in different scientific domains is the focus of a number of papers, as well as integrating training into data creation organisations. The Journal is available from the IJDC website. Retrieved 30 March 2008 from: <http://www.ijdc.net/ijdc/issue/current>

A number of papers have been released by the DCC that concentrate on data workflow and repository trustworthiness. A new Standards Watch paper is available, which concentrates on the automated procedures needed for large scale data curation. The paper highlights how the use of standards is key to successfully sharing and curating data across the community. The Briefing papers section has been expanded, one touches on trustworthiness of digital repositories and how to assess which ones are worthy of offering preservation services. The article highlights the use of the recently released tool DRAMBORA [for more on this toolkit see TOOLS] and how organisations can carry out their own self-assessment. The second briefing paper investigates the value of appraisal and selection in the curation workflow. Different appraisal criteria are given, as well as the benefits of including appraisal and selection in the curation process.

Higgins, Sarah (2008) *Standards Watch 5: Workflow Standards for e-Science*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/standards-watch/workflow-standards-for-e-science/>

McGinley, Mags (2008) *IPR in Databases*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/legal-watch/ipr-in-databases/>

McHugh, A (2007) *Building Trust Through Repository Self-Assessment*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/briefing-papers/trust-through-self-audit/>

Harvey, R (2008) *Appraisal and Selection*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/briefing-papers/appraisal-and-selection/>

The Digital Curation Manual has also been expanded to include four more chapters on different topics,

Abrams, S (2007) *File Formats*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/curation-manual/chapters/file-formats/>

Campbell, L (2007) *Learning Object Metadata*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/curation-manual/chapters/learning-object-metadata/>

Doerr, M (2008) *Ontologies*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/curation-manual/chapters/ontologies/>

Holdsworth, D (2007) *Preservation Strategies*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/curation-manual/chapters/preservation-strategies/>

The DCC have announced that they will be offering a Digital Curation Summer School (DCSS) in early autumn 2008. The summer school is funded by JISC and will provide participants with the skills they will need to conceptualise, create, manage, describe, store, and reuse data over time. Participation in DCC DCSS will introduce attendees to the DCC Digital Curation Life-Cycle Model1 and provide them with a firm understanding of the individual role(s) they play in this life-cycle over time. The summer school

will focus on the practical, rather than the theoretical, and will contribute towards bridging the gap that currently exists between a general awareness of curation and preservation issues amongst the information services and scientific community, and their ability to practically address digital curation and preservation challenges within their actual working environment. In addition, the DCC Digital Curation Summer School will offer students an opportunity to network with other scientific researchers, international experts, and practitioners across disciplinary and national boundaries.

Further details about the DCC DCSS will be released soon via the DCC web site. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk>.

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### 1.3 JISC

A number of preservation projects are progressing under the aegis of the JISC Repositories and Preservation Capital programme and the first of these to conclude (April 2008) will be the **Data Exchange Tools (DExT)** project. Based at the UK Data Archive, this project has developed tools to ensure that social sciences research data can be effectively imported and exported between data formats, thereby facilitating long-term access and enhancing the potential for active curation of the data to take place. Retrieved 30 March 2008 from: <http://www.data-archive.ac.uk/dext/>

A few months later in June 2008, the **Life Cycle Information for e-Literature (LIFE2)** project is due to report and they will be making available the work they have done on methods to quantify the likely costs of preserving e-literature type material. A conference has been organised to launch and disseminate this work and will take place on the 23<sup>rd</sup> June at the British Library. Retrieved 30 March 2008 from: <http://www.life.ac.uk/2/>

Another project called **Complex Archive Ingest for Repository Objects (CAIRO)** will conclude in August. The objective of this work has been to develop a tool for the ingest of complex collections of born-digital materials (email, websites, documents etc.) into a preservation repository, including basic descriptive, preservation and relationship metadata. Retrieved 30 March 2008 from: <http://cairo.paradigm.ac.uk/>

A number of other projects will be concluding during the period up to March 2009 and details of these can be found on the JISC Preservation web pages which also contain links to recent reports such as the **e-journal registry feasibility study** which looks at possible models for enabling researchers to identify where any particular e-journal has been archived. Retrieved 30 March 2008 from: [http://www.jisc.ac.uk/whatwedo/programmes/programme\\_preservation.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_preservation.aspx)

Other initiatives at JISC include work in the area of **Significant Properties** of digital objects and four studies are currently being concluded (March 2009) that analyse what aspects or components of various types of digital object may need to be considered in order that they can be effectively preserved and re-used over long periods. The studies cover vector images, moving images, software and e-learning objects.

JISC has awarded the **UK LOCKSS Pilot programme** some further interim funding to assist institutions with making their decision about e-journal archiving strategies

and have also commissioned a pilot evaluation study and an e-journal archiving comparison study to provide further information for the UK Higher Education sector. Retrieved 30 March 2008 from: [http://www.jisc.ac.uk/home/whatwedo/programmes/programme\\_preservation/programme\\_lockss.aspx](http://www.jisc.ac.uk/home/whatwedo/programmes/programme_preservation/programme_lockss.aspx)

A number of activities are being taken forward collaboratively and JISC is working with: the National Science Foundation (NSF) to establish the long term economic costs of digital preservation; the UK Web Archiving Consortium (UKWAC) to discuss ways of preserving web resources of interest to UK HE; and a number of international partners to report on national approaches to copyright as it pertains to digital preservation activities. JISC continues to fund and work closely with the **Digital Curation Centre (DCC)** who are contributing to a programme of work that is looking at the problems associated with curating 'data'.

A recently published report synthesises the results of the 2004 to 2006 4-04 programme and touches on all the JISC funded projects in this strand.

Pennock, M. (2008) *JISC Programme Synthesis Study: Supporting Digital Preservation and Asset Management in Institutions: a review of the 4-04 programme on digital preservation and asset management in institutions for the JISC Information Environment*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/docs/publications/404publicreport-2008.pdf>

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#### 1.4 The National Archives, UK

The TNA are leaders in the Digital Continuity project, set up to look at preserving the digital information output of government departments in the medium term, from 3-30 years. The project will explore issues such as how IT is managed within a department, the volumes of data created and who takes records management decisions. This project works in conjunction with the TNA's 'Seamless Flow' digital preservation project. Retrieved 30 March 2008 from: <http://www.nationalarchives.gov.uk/electronicrecords/digitalcontinuity/default.htm>

The TNA was the Digital Preservation Award winner for its work on PRONOM and DROID. [See under DPC for more details of this award]

Expanding the UK Government Web Archive: The National Archives are moving into the next phase of their web archiving, with Web Continuity - looking to harvest and manage access to online government information. Building on 5 years' of collecting selected sites, Web Continuity is aiming to capture the whole of the UK central government web estate. Further information is available from the TNA website. Retrieved 30 March 2008 from: <http://nationalarchives.gov.uk/webcontinuity/>

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#### 1.5 The National Library of Scotland (NLS)

The National Library of Scotland (NLS) has completed the pilot phase of its web archiving system and is now transferring its selective archive collection plan. The pilot activity has successfully identified a number of varied functional requirements

and network/communications improvements to be incorporated into the NLS repository system.

Collaborative web archiving is an ongoing activity within the UK with the archive continuing to grow and improve. The collective service and archive have moved from an infrastructure based on the PANDAS/Pandora toolset to one hosted by the British Library using the IIPC (International Internet Preservation Consortium) toolset and Web Curator Tool. The freely available archive of UK websites remains very much alive at [www.webarchive.org.uk](http://www.webarchive.org.uk)

As part of the ongoing Trusted Digital Repository development programme, the team continues to develop 'back office' metadata management and ingest tools to comply with the OAIS model, in line with our mandate for preservation. Various other workflow tools are similarly being created that are bringing together the 'heart' of the National Library of Scotland TDR system.

The Library has also recently commenced a user engagement exercise following on from the delivery of a prototype hosted repository product developed in conjunction with the JISC funded IRIScotland project. The resulting forums are being used to develop a user led repository service aimed squarely at providing long term preservation benefits to the Scottish research community through the TDR, in addition to providing increased access to archived content. Development activity will commence in the second quarter of this year (2008) with a view to releasing the first beta service implementation of the product at the beginning of 2009.

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## 1.6 The British Library (BL)

The British Library has published its Risk Assessment Report (version 2.2), which assesses the condition of its digital collections, identifies strategies to mitigate the risks, and recommends and plans the actions to be taken. More information about digital preservation at the BL and the report itself can be found from the British Library website. Retrieved 30 March 2008 from:

<http://www.bl.uk/aboutus/stratpolprog/ccare/introduction/digital/>

McLeod, R., Bright, P., Wheatley, P. (2007) *Risk Assessment 2007*. Retrieved 30 March 2008 from:

<http://www.bl.uk/aboutus/stratpolprog/ccare/introduction/digital/riskassessment.pdf>

Digital Lives project: The British Library in partnership with UCL and University of Bristol. This is a major research project focussing on personal digital collections and their relationship with research repositories, addressing, amongst other things:

1. how curators should approach selection, description, preservation and access for personal digital collections
2. potentially transferable tools such as computer forensics or synchronisation which could assist with management, description, and preservation of personal digital collections or facilitate access to them
3. new services acting as intermediaries for managing and publishing personal digital collections and assessing their potential effectiveness for preservation.

The research for Digital Lives commenced in September 2007 and will run for 18 months to March 2009. Retrieved 30 March 2008 from: <http://www.bl.uk/digital-lives/>

LIFE2: The LIFE project made the first major steps forward in planning for and costing digital preservation activities and, despite its small size, had a significant impact. LIFE2, an 18-month project which began in February 2007, will rigorously test and refine the methodology and will apply it to a range of new case studies including digital repositories, primary data and digitised newspapers. A discussion paper, which draws together feedback, discussion and review of the LIFE Model is now available. Retrieved 30 March 2008 from: <http://www.life.ac.uk/>

Wheatley, P. and Ayris, P. and Davies, R. and Mcleod, R. and Shenton, H. (2007) *The LIFE Model v1.1*. Discussion paper. LIFE Project, London, UK. (Unpublished) Retrieved 30 March 2008 from: <http://eprints.ucl.ac.uk/4831/>

The results of LIFE2 will be presented at the LIFE2 Conference, to be held on 23 June 2008 at The British Library in London. Other topics will include mapping digital and analogue lifecycles, as well as the updated LIFE costing model and how to go about using the LIFE model in one's own institutions. More information can be found at the LIFE Project Blog. Retrieved 30 March 2008 from: <http://www.life.ac.uk/blog/2008/02/>. A paper on costing for LIFE is also available.

Wheatley, P., Ayris, P., Davies, R., McLeod, R., and Shenton, H. (2007) *LIFE: Costing the digital preservation lifecycle*. In: iPRES Annual Conference 2007, 11-12 October 2007, Beijing, China. (Unpublished) available online via the eprints website. Retrieved 30 March 2008 from: <http://eprints.ucl.ac.uk/4914/>

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## 1.7 PLANETS (Preservation and Long-term Access through Networked Services)

The project has completed initial releases of each of the major software components in the Planets platform, including:

1. **The Planets Preservation Planning Tool (Plato)**, which enables organisations to make informed selection of the most appropriate preservation plan against requirements.
2. **The Modular Emulator**, which allows 1980s software applications to run in a simulated computer environment, and the Universal Virtual Computer, which provides an alternative approach to emulation that allows interaction with software long into the future.
3. **The Preservation Characterisation Registry**, a core component that supports automatic identification of the essential characteristics of digital materials we wish to preserve.
4. Extension to the **XCEL-Based Significant Property Extraction Tool**, which now supports textual formats in addition to image, sound and other non-textual formats.
5. **The Planets Testbed**, a controlled software environment that allows researchers and practitioners to conduct digital preservation experiments and gather data on a scientific basis.
6. **The Planets Interoperability Framework** that provides shared functions and integrates the Planets tools and services into an easily managed preservation system. Its extensibility allows plug-in of third party tools and services.

These initial software releases will enable Planets partners to conduct case studies



and refine support for key preservation work. They will lead to public availability of the software that members of the wider digital preservation community will be able to use.

The Planets project has published various papers and has presented at a number of conferences during the last six months. These have covered topics such as Preservation Planning, Object Characterisation and Emulation. Links to all these papers and presentations are given in the recent Planets Newsletter, Issue 3, on the Planets website. Retrieved 30 March 2008 from: <http://planets-project.eu/docs/newsletters/PlanetsNewsletterIssue3.pdf>.

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### **1.8 nestor (Network of Expertise in Long-Term Storage of Digital Resources)**

Nestor has been involved with a standardisation project initiated by the Innovation with Norms and Standards (INS) Institute. The government-led project recognises the need for standardisation in digital preservation and has set up a working group to take some concrete steps for action. Its long term aim is to collaborate with international standardisation groups. The study addresses the fact that the persistent identifier systems currently in use, such as Uniform Resource Names (URNs), Digital Object Identifiers (DOIs) and the handle system, are mutually incompatible. More information can be found on the Norms and Standards website. Retrieved 30 March 2008 from: <http://www.ins.din.de/cmd?level=tpl-home&contextid=ins&languageid=en>

Digital preservation techniques were showcased by Nestor, DPE, CASPAR, and Planets at the CeBIT stand, 'WePreserve – European Digital Preservation Initiatives' 4-9 March 2008. The event was a great success for the four projects and generated a great deal of interest within the business community, the general public and also the German Government. Among the many visitors to the 'WePreserve' stand was Bern Neumann, German Minister of State to the Federal Chancellor and Federal Government Commissioner for Culture and the Media

The latest Nestor newsletter was published in December and is available online. Retrieved 30 March 2008 from: <http://nestor.sub.uni-goettingen.de/newsletter/index.php?lang=en>

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### **1.9 DigitalPreservationEurope (DPE)**

The second **Digital Preservation Challenge** was announced in January 2008. The challenge invites participants to overcome the barriers hindering access to five digital objects. Each set of objects is accompanied by a highly abstracted scenario based on real-life situations. These scenarios are intended to make the challenge more accessible to participants from all backgrounds while not trivialising the serious nature of the digital preservation challenges facing society. The deadline for the challenge is 30 May 2008. More information is available from the DPC website. Retrieved 30 March 2008 from: <http://www.digitalpreservationeurope.eu/challenge/>

The DPE is working on a **research roadmap** which aims to contribute to the planning of the future research and development in Digital Preservation by means



of analysing both the state of the art in Digital Preservation research and existing research. The roadmap offers experts a chance to contribute their ideas about what preservation research needs to be done through an online DELPHI survey, interviews and thorough workshops. Building on these investigations and contributions DPE has released a draft Research Roadmap identifying ten core domains for preservation research: **Restoration, Conservation, Management, Risk, Significant Properties of Digital Objects, Interoperability, Automation, Context, Storage, and Experimentation**. For further information please contact Holger Brocks: [Holger.Brocks@FernUni-Hagen.de](mailto:Holger.Brocks@FernUni-Hagen.de)

DPE have recently published a report, *Market and Technology Trends Analysis* provides the digital preservation community with information on the most common technological solutions currently available for digital preservation. This analysis is based on an extensive survey distributed to the digital preservation community. The report is available from the DPE website.

DigitalPreservationEurope (2007) *Market and Technology Trends Analysis*, DPE-D6.1, Retrieved 30 March 2008 from:  
<http://www.digitalpreservationeurope.eu/publications/reports/dpe-market-analysis.pdf>

DPE recommends the establishment of a federated network of competence centres with a single, common interface to the provision of resources and services. This approach will help to solve digital curation and preservation challenges that could not be solved by any single centre alone. DPE hosts a registry of competence centres, which is regularly updated at the DPE website. Retrieved 30 March 2008 from: <http://www.digitalpreservationeurope.eu/registries/competence-centres/list/>

DigitalPreservationEurope (DPE) Research and Industrial Exchange (DPEX) call for applications. This exchange programme aims to encourage innovative practice through research collaboration and to build bridges between practitioners and researchers. Exchanges should typically last for four weeks and the DPEX support of up to 3500 Euros per exchange can be used to partially meet the costs of accommodation, subsistence, and travel. The deadline for applications is the 1<sup>st</sup> of each month. Further information can be found on the DPE webpage. Retrieved 30 March 2008 from: <http://www.digitalpreservationeurope.eu/exchange>

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### 1.10 National Library of the Netherlands (Koninklijke Bibliotheek)

Mass digitization projects are taking off at the Koninklijke Bibliotheek. A report on "Alternative File Formats for Storing Master Images of Digitisation Projects" is now available at the KB website. In the coming four years millions of high resolution, RGB (Red, Green, Blue) master image files will be made and will have to be (permanently) stored. If all 40 million files are stored as uncompressed TIFFs, the estimate is that the KB will need no less than 650 TB of storage space by 2011. Currently, the main question the KB faces revolves around necessity: do all master image files really need to be stored as uncompressed TIFF files and added to our long term repository? The KB has conducted a research project focusing on finding alternative file formats for the storage of master image files depending on the different purposes of the digitization. The draft version of the report was presented to a group of selected specialists on digitisation, digital preservation and image science. Their feedback is incorporated in the final version of the report that can be

found at the KB web site. Retrieved 30 March 2008 from: [http://www.kb.nl/hrd/dd/dd\\_links\\_en\\_publicaties/publicaties/Alternative%20File%20Formats%20for%20Storing%20Masters%20%201.pdf](http://www.kb.nl/hrd/dd/dd_links_en_publicaties/publicaties/Alternative%20File%20Formats%20for%20Storing%20Masters%20%201.pdf)

File Format Risk Assessment Method: The KB has developed a quantifiable file format risk assessment method. This method can be used to define digital preservation strategies for specific file formats. The choice for a specific file format at creation time or later in the life cycle of a digital object influences the long-term access to the digital object. The evaluation method contains seven sustainability criteria for file formats that are weighed for importance. A description of the current version of the method can be found at the KB website. Retrieved 30 March 2008 from: [http://www.kb.nl/hrd/dd/dd\\_links\\_en\\_publicaties/publicaties/KB\\_file\\_format\\_evaluation\\_method\\_27022008.pdf](http://www.kb.nl/hrd/dd/dd_links_en_publicaties/publicaties/KB_file_format_evaluation_method_27022008.pdf)

A KB report has recently been published which analyses the 'e-depot' system, and the strategic implications it will have on the organisation. The report is also of value to the digital preservation community as it provides a succinct overview of the running of an active digital repository as well as preservation recommendations. The report covers the interests of a range of stakeholders

Hoorens, S., Rothenberg, J., van Oranje, C., van der Mandele, M., and Levitt, R. (2007) *Addressing the uncertain future of preserving the past*. RAND Corporation, Santa Monica, CA, USA. Retrieved 30 March 2008 from: [http://www.kb.nl/hrd/dd/dd\\_links\\_en\\_publicaties/publicaties/rand\\_report\\_e-depot\\_TR510\\_3c\\_Cover.pdf](http://www.kb.nl/hrd/dd/dd_links_en_publicaties/publicaties/rand_report_e-depot_TR510_3c_Cover.pdf)

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### 1.11 Netherlands Coalition for Digital Preservation

A Netherlands Coalition for Digital Preservation (NCDD) has been established. At the initiative of the National Library of the Netherlands (Koninklijke Bibliotheek, KB), and Data Archiving and Networked Services (DANS), the Coalition was established early 2008. The NCDD aims to establish a sustainable technical and organisational infrastructure in the Netherlands within the next five years. In addition, it will serve as a platform for sharing knowledge and expertise.

Members of the Coalition include 3TU. Federation, Netherlands Institute for Sound and Vision, Statistics Netherlands, Royal Netherlands Academy of Arts and Sciences, Dutch Ministry of the Interior, National Archives, Netherlands Organisation for Scientific Research, and SURFfoundation.

The first strategic initiative of the Coalition is a national survey to assess the status quo of digital preservation in the Netherlands: In particular, the study aims to determine which organisations preserve which categories of data and in what manner, and to assess what risks the public sector is running to incur digital data loss. The survey will result in strategic recommendations for concerted action.

The Coalition's office, with coordinator Inge Angevaare ([inge.angevaare@kb.nl](mailto:inge.angevaare@kb.nl)) is based at the Koninklijke Bibliotheek and the English-language website is now available. Retrieved 30 March 2008 from: <http://www.ncdd.nl/en/>

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### 1.12 US National Science Foundation (NSF) and the National Digital Information Infrastructure and Preservation Program (NDIIPP).

The National Science Foundation, Office of Cyberinfrastructure has put out a call for applications to its new programme, DataNet: Sustainable Digital Data Preservation and Access Network Partners. This programme aims to build cross-domain exemplar organisations which will assist the communities of researchers and scholars to face the challenges of data curation of all types of data. More information is available via the NSF website. Retrieved 30 March 2008 from: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503141&org=OCI&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503141&org=OCI&from=home)

The NDIIP is expanding its initiative by adding more partners to its network. These include state government agencies, geospatial archives and state library and archives. More information can be found from the Library of Congress website. Retrieved 30 March 2008 from: <http://www.digitalpreservation.gov/library/reports.html>

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### 1.13 University of London Computer Centre (ULCC)

The ULCC recently delivered a condensed three day version of the Digital Preservation Training Programme (DPTP) event in Scotland. Aimed at managers in institutions who are grappling with fundamental DP issues DPTP is predicated on the need for institutions to combine organisational and technological perspectives to devise an appropriate response to the challenges that digital preservation requirements present. More details can be found on the DPTP website and the ULCC blog. Retrieved 30 March 2008 from: <http://www.ulcc.ac.uk/dptp/> and <http://dablog.ulcc.ac.uk/>

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### 1.14 EU Activities

A recent EU report, "Council Conclusions on scientific information in the digital age: access, dissemination and preservation" invites EU member states to carry out a number of information-related tasks and makes a number of key recommendations. This includes taking a structured approach when setting up digital preservation and legal procedures for scientific information. It also recognizes the importance of linking research and experiments at a cross-European level. More information can be found at the EU Commission's Research site.

*Council Conclusions on scientific information in the digital age: access, dissemination and preservation.* Council of the European Union. 2007.

Retrieved 30 March 2008 from:

[http://ec.europa.eu/research/infrastructures/pdf/97236\\_en.pdf](http://ec.europa.eu/research/infrastructures/pdf/97236_en.pdf)

The EU Alliance for Permanent Access has published papers from a conference entitled "Science Assets of the Digital Age at Risk" which addressed the need to implement a sustainable infrastructure for the preservation of scientific records. The Alliance will work to an agreed set of standards for their interoperable repositories. The papers can be found from the Alliance's website. Retrieved 30 March 2008 from: <http://www.alliancepermanentaccess.eu/index.php?id=7>

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## 2. Specific themes

### 2.1 Digital Preservation - definitions, frameworks & directions

A paper given at the last European Conference on Research and Advanced Technology for Digital Libraries (ECDL) conference investigates the key research challenges of digital preservation and the role the science will play in digital libraries if they are to have long term viability at the centre of the global information society.

Ross, S. (2007), *Digital Preservation, Archival Science and Methodological Foundations for Digital Libraries*, Keynote Address at the 11th European Conference on Digital Libraries (ECDL), Budapest (17 September 2007). Retrieved 30 March 2008 from:

[http://www.ecdl2007.org/Keynote\\_ECDL2007\\_SROSS.pdf](http://www.ecdl2007.org/Keynote_ECDL2007_SROSS.pdf)

A journal article by Priscilla Caplan gives an overview of digital preservation and where the discipline is today in terms of technologies and tools and trends. The article also covers activities in specific countries, some interesting repositories and some special preservation issues.

Caplan, P (2008) "The Preservation of Digital Materials" *Library Technology Reports* 44(2), February/March 2008. Retrieved 30 March 2008 from:

<https://publications.techsource.ala.org/products/archive.pl?article=2614>

The Research Information Network (RIN) has finalised its draft set of data principles and has published a framework of key principles and guidelines. Five broad principles are put forward, for the benefit of a range of stakeholders, including one which addresses digital preservation. The framework poses some key preservation questions which are crucial for the digital curator. The full document is available from the RIN website, where a succinct summary document can also be found.

*Stewardship of digital research data: a framework of principles and guidelines.* (2008) Research Information Network. Retrieved 30 March 2008 from: <http://www.rin.ac.uk/data-principles>

Digital Preservation Europe (DPE) has started a series of 'position' papers putting forward controversial viewpoints. A recent paper hints that the digital preservation community is alarmist in its outlook and that it can't provide enough evidence for *not* being able to access valuable data in the future.

Harvey, R (2008) *So where's the black hole in our collective memory? A Provocative Position Paper* Retrieved 30 March 2008 from: [http://www.digitalpreservationeurope.eu/publications/position/Ross\\_Harvey\\_black\\_hole\\_PPP.pdf](http://www.digitalpreservationeurope.eu/publications/position/Ross_Harvey_black_hole_PPP.pdf)

A Blue Ribbon Task Force on Sustainable Digital Preservation and Access has been set up to develop sustainable recommendations for digital preservation. The task force is co-chaired by both the San Diego Supercomputer Centre and OCLC and consists of an international group of experts. More information is available via the OCLC website. Retrieved 30 March 2008 from:

<http://www.oclc.org/news/releases/200692.htm>

The summer 2007 issue of *Library trends* is devoted to cultural heritage preservation including the value of digital preservation. The articles explore issues such as collaboration, digital culture, virtual collections and preservation expertise. Some articles of note are: (*n.b these articles are available only to Muse online journal subscribers*)

Besser, H. (2007) "Collaboration for Electronic Preservation" *Library Trends* 56(1), Summer 2007. Retrieved 30 March 2008 from:  
[http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

Bradley, K. (2007) "Defining Digital Sustainability" *Library Trends* 56(1), Summer 2007. Retrieved 30 March 2008 from:  
[http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

Lusenet, Yola de. (2007) "Tending the Garden or Harvesting the fields: Digital Preservation and the UNESCO Charter on the Preservation of the Digital Heritage" *Library Trends* 56(1), Summer 2007. Retrieved 30 March 2008 from: [http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

Mason, I. (2007) "Virtual Preservation: How has Digital Culture Influenced Our Ideas about Permanence? Changing Practice in a National Deposit Library" *Library Trends* 56(1), Summer 2007. Retrieved 30 March 2008 from: [http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

Smith, A. (2007) "Valuing Preservation" *Library Trends* 56(1), Summer 2007. Retrieved 30 March 2008 from:  
[http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

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## 2.2 Copyright & IPR

A recently published book, *Digital Copyright*, by Paul Pedley is reviewed in the latest edition of *Ariadne*. It touches on database rights and legal deposit in the digital arena. While it does not cover all aspects of digital copyright, the book can provide the reader with a number of useful pointers. The review can be found on the *Ariadne* website,

Pedley, P. (2007) *Digital Copyright*, London, Facet Publishing

Hannabuss, S. (2008) "Digital Copyright" *Ariadne* 54, January 2008.

Retrieved 30 March 2008 from:

<http://www.ariadne.ac.uk/issue54/hannabuss-rvw/>

Copyright laws in Israel have been altered so that libraries can copy copyrighted works and in turn migrate it to newer platforms for preservation purposes. This also has implications for web and domain archiving as internet sites are also permitted to be copied and thus archived. More information can be found via the PADI Listserv. Retrieved 30 March 2008 from:

<http://listserver.nla.gov.au/www/arc/padiforum-l/2007-12/msg00002.html>

The Digital Curation Centre (DCC) has released a Legal Watch Paper on how databases are affected by copyright law, and touches on the 'Database Right'. The paper gives a number of valuable recommendations including follow-up resources. Some interesting presentations on copyright can also be found via the DCC website which held an event to give an overview of the legal considerations of data curation. *The Legal Environment of Digital Curation* tackled the main issues that concern non-legal professionals such as the Freedom of Information Act, licensing and database protection issues.

McGinley, M. (2007) *IPR in Databases* DCC Legal Watch Paper. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/resource/legal-watch/ipr-in-databases/>

*The Legal Environment of Digital Curation* 23 November 2007. Digital Curation Centre Workshop. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/events/legal-env-dig-cur-2007/>

Whyte, A. (2007) Report from the DCC Workshop: 'The Legal Environment of Digital Curation'. *International Journal of Digital Curation* (2)2 2007. Retrieved 30 March 2008 from: <http://www.ijdc.net/ijdc/article/view/51/57>

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## 2.3 Repositories

The Wellcome library has been accepting born digital materials into its collections for the last six months. To support these activities they have made available a 'Digital Curation' section on their website, which lists a number of useful FAQs as well as a Digital Curation Toolbox. Retrieved 30 March 2008 from: <http://library.wellcome.ac.uk/node288.html>

An article in Ariadne sets out how the Wellcome library plans to deal with this digital data, and also focuses on the creators of the data and the workflows to and from the archive. The authors also acknowledge the importance of using existing skills in the archival workforce, and mirroring traditional processes which are already in place.

Hilton, C. & Thompson, D. (2007) "Further Experiences in Collecting Born Digital Archives at the Wellcome Library" *Ariadne* 53, October 2007. Retrieved 30 March 2008 from: <http://www.ariadne.ac.uk/issue53/hilton-thompson/>

A DigitalPreservationEurope briefing paper on open access repositories explores the properties a trusted repository must have as well as the policies that must be in place to manage the repository.

Pasqui, V (2007) *Digital Preservation and Open Access Archives*. Retrieved 30 March 2008 from: [http://www.digitalpreservationeurope.eu/publications/briefs/open\\_archives\\_pasqui.pdf](http://www.digitalpreservationeurope.eu/publications/briefs/open_archives_pasqui.pdf)

A recently published paper describes an institution's workflow management system,

based on Fedora. The Ingest process is described as well as the METS metadata creation function scalability and altering of the system to open source so that other institutions can use it.

Agnew, G. & Yu, Y. (2007) "The Rutgers Workflow Management System: Migrating a Digital Object Management Utility to Open Source" *Code4Lib Journal* Issue 1, 2007-12-17. Retrieved 30 March 2008 from: <http://journal.code4lib.org/articles/25>

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## 2.4 Institutional repositories

Uptake and use of institutional repositories [IRs] is a theme of many articles in recent D-Lib issues. The Journal of Digital Information devotes an entire issue to digital preservation and trusted repositories. Just how to judge the success of a repository is as yet uncertain and many articles explore this, as well as the obstacles that hinder the swift uptake of these IRs.

Cat McDowell describes the state of institutional repositories since 2005. The article applies a methodology by comparing repository size as a criterion to evaluate the success of U.S repositories. Thomas and McDonald also summarise a study of author/depositor distribution patterns, another possible technique to analyse repository success. Markey et al. describe the MIRACLE research project which is looking into university involvement with IRs and the paper puts forward preliminary findings. Jihyun Kim reports on a study of factors that motivate or impede faculty contribution to the IR and summarises findings from a study. Thibodeau's article argues that the success of a repository should be judged according to how well it operates in its cultural and resource context.

The Utah Digital Repository provides a useful structure for organisations to follow in setting up their own institutional repositories. The article outlines how three libraries were able to use this toolkit to set up their repositories.

Rieh et al. point out how there is much uncertainty underlying institutional repositories both for organisations that already have repositories and for those about to set one up. Key components of repository infrastructure were examined in a recent census and the article provides a useful overview of the difficulties institutions face such as responsibility and funding.

In the most recent issue of D-Lib, Ferreira et al. look at the problem of both slow adoption and low deposit rates and at the University of Minho initiatives were explored to promote the repository, such as value-added services for authors.

Estlund, K & Neatrour, A (2007) "Utah Digital Repository Initiative" *D-Lib Magazine* (13)11/12 November/December 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/november07/neatrour/11neatrour.html>

Ferreira, M., Baptista, A., Rodrigues, E., & Saraiva, R (2008) "Carrots and Sticks: Some Ideas on How to Create a Successful Institutional Repository" *D-Lib Magazine* (14)1/2 January/February 2008. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/january08/ferreira/01ferreira.html>

Kim, J (2007) "Motivating and Impending Factors Affecting Faculty Contribution to Institutional Repositories" *Journal of Digital Information* (8)2 Retrieved 30 March 2008 from:



<http://journals.tdl.org/jodi/article/view/193/177>

Markey, K. St. Jean, B., Rieh, S., Kim, J., and Kim, Y. (2007) "Nationwide Census of Institutional Repositories: Preliminary Findings" *Journal of Digital Information* (8)2 Retrieved 30 March 2008 from: <http://journals.tdl.org/jodi/article/view/194/170>

McDowell, C (2007) "Evaluating Institutional Repository Deployment in American Academe Since Early 2005" *D-Lib Magazine* (13) 9/10 September/October 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/september07/mcdowell/09mcdowell.html>

Moore, R. and Smith, M. (2007) "Automated Validation of Trusted Digital Repository Assessment Criteria" *Journal of Digital Information* (8)2 . Retrieved 30 March 2008 from: <http://journals.tdl.org/jodi/article/view/198/181>

Rieh, S., Markey, K., St. Jean, B., Yakel, E., & Kim, J., (2007) "Census of Institutional Repositories in the U.S." *D-Lib Magazine* (13)11/12 November/December. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/november07/rieh/11rieh.html>

Thomas, C. and McDonald, R. (2007) "Measuring and Comparing Participation Patterns in Digital Repositories" *D-Lib Magazine* (13) 9/10 September/October 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/september07/mcdonald/09mcdonald.html>

Treloar, A., Groenewegen, D., and Harboe-Ree, C. (2007) "The Data Curation Continuum" *D-Lib Magazine* (13) 9/10 September/October 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/september07/treloar/09treloar.html>

Thibodeau, K., (2007) "If you build it, will it fly? Criteria for success in a digital repository" *Journal of Digital Information* (8)2. Retrieved 30 March 2008 from: <http://journals.tdl.org/jodi/article/view/197/174>

The JISC Repositories Support Programme [RSP] have set up a series of Professional briefing and networking events which will run until March 2008 and will provide attendees with valuable opportunities to learn key repository skills and meet peers. Information and papers from past events are online at the RSP website. Retrieved 30 March 2008 from: <http://www.rsp.ac.uk/events/ProfBrief.php>

The new DRIVER project is also tackling the challenge of engaging researchers in open access IRs. The project aims to create a unified approach to managing the repository landscape and to enhance repository development, as well as setting up a number of test-bed repositories. The project recognises that interoperability across repositories is needed. An article in *Ariadne* outlines the DRIVER project and three comprehensive reports available via the DCC website detail the DRIVER but also contains much valuable information on many repository-related issues.

Feijen, M. Horstmann, W., Manghi, P., Robinson, M., and Russell, R. (2007) "DRIVER: Building the Network for Accessing Digital Repositories across Europe" *Ariadne*, Issue 53. Retrieved 30 March 2008 from: <http://www.ariadne.ac.uk/issue53/feijen-et-al/>

Foulonneau, M. and Andre, F., (2008) *Investigative Study of Standards for Digital Repositories and Related Services* Amsterdam University Press.

Retrieved 30 March 2008 from: <http://dare.uva.nl/document/93727>

van der Graaf, M. and van Eijndhoven, K., (2008) *The European Repository Landscape* Amsterdam University Press. Retrieved 30 March 2008 from: <http://dare.uva.nl/document/93725>

Weenink, K., Waaijers, L., and van Godtsenhoven, K., (eds.) (2008) *A DRIVER's Guide to European Repositories* Amsterdam University Press. Retrieved 30 March 2008 from: <http://dare.uva.nl/document/93898>

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## 2.5 Digital Preservation and the Information Profession

As the field of digital preservation expands, so building a professional workforce and training becomes an important issue. This is the focus of a number of papers in the last few months. A briefing paper by the DPE explores the benefit of different learning technologies and e-learning for information professionals,

Harvey, R. (2007) *Professional Development in digital preservation: a life-long requirement*. Retrieved 30 March 2008 from: [http://www.digitalpreservationeurope.eu/publications/briefs/professional\\_development.pdf](http://www.digitalpreservationeurope.eu/publications/briefs/professional_development.pdf)

Another article explores the intellectual issues of digital content and by looking at the University of Glasgow's Information Management and Preservation MSc programme; it highlights how a cross-disciplinary approach brings a range of influences which are crucial for a firm knowledge base.

Moss, M., and Ross, S. (2007) "Educating Information Management Professionals: The Glasgow Perspective", *Journal of Education for Library and Information Science*, Vol 48, No 4 (Fall 2007), 294-308.

A two-part article in D-Lib examines the role of librarians and information professionals and the challenges facing those who have traditionally been responsible for the curation of the scientific record. It sets out the importance of librarians making new relationships with scientists and data professionals and investing in developing new skills.

Gold, A. (2007) "Cyberinfrastructure, Data and Libraries, Part 1: A Cyberinfrastructure Primer for Librarians" *D-Lib Magazine* v. 13 No. 9/10 September/October 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/september07/gold/09gold-pt1.html>

Gold, A. (2007) "Cyberinfrastructure, Data and Libraries, Part 2: Libraries and the Data Challenge: Roles and Actions for Libraries" *D-Lib Magazine* v. 13 No. 9/10 September/October 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/september07/gold/09gold-pt2.html>

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## 2.6 Web Archiving

One of the outcomes of the National Digital Information Infrastructure Preservation Program (NDIIPP) is a web archiving project that uses a web crawler to help

prepare the website for archiving and thus alleviate the tasks of an archivist. The resource is analysed and metadata is added so that the object will arrive at the archive preservation ready. The article is published in January's edition of D-Lib.

Smith, J., and Nelson, M. (2008) "Creating Preservation-Ready Web Resources" *D-Lib Magazine* (14) 1/2 January/February 2008. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/january08/smith/01smith.html>

An article in the *Serials Librarian* outlines the selection, acquisition and management techniques for web archiving at the Library and Archives of Canada. It also covers other web archiving activities.

Lillenitt, R. (2007) "Archiving the Canadian Web: Experiences at Library and Archives Canada" *The Serials Librarian* v. 53 Issue 1/2 2007. N.b. article available to *Serials Librarian* subscribers only.

The website of the Deutscher Bundestag (Lower House of German Parliament) is now retrievable online. Since 2005 the site has been archived, and the archive adheres to three fundamental archiving principles: user-friendliness; authenticity and sustainability. The site is accessible from the Parliament website. Retrieved 30 March 2008 from: <http://webarchiv.bundestag.de/cgi/archive.php?jahr=2008>

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## 2.7 Digital Preservation Life-cycle

A number of articles address different aspects of the preservation lifecycle, from appraisal to ingest, to automatic metadata extraction.

**Life-cycle:** An article in the *International Journal of Digital Curation* sets out the draft lifecycle model for the Digital Curation Centre. The model is generic and can be applied to any organisation across the whole lifecycle, or at stages throughout it. Comments on the draft are welcome.

Higgins, S (2007) "Draft DCC Curation Lifecycle Model", *International Journal of Digital Curation*. V. 2, No. 2 2007. Retrieved 30 March 2008 from: <http://www.ijdc.net/ijdc/article/view/45/52>

Robert Sharpe highlights the different procedures when carrying out preservation functions. The article provides a detailed approach to the different stages of the life cycle such as access, preservation planning and administration.

Sharpe, R (2007) "Preservation requires planning and maintenance." *Research Information*. August/September 2007. Retrieved 30 March 2008 from: [http://www.researchinformation.info/features/feature.php?feature\\_id=142](http://www.researchinformation.info/features/feature.php?feature_id=142)

**Appraisal:** Appraisal is the subject of a number of papers. Oliver et al. report on the technology available to automate appraisal, especially in an 'uncontrolled' environment. Another 'position' paper by DPE argues why random selection is the best approach to the appraisal process.

Oliver, G., Ross, S., Guercio, M., and Pala, C. (2008), *Report on Automated re-Appraisal: Managing Archives in Digital Libraries* Paper given at Second DELOS Conference on Digital Libraries, 5-7 December 2007.

Neumayer, R. and Rauber, A. (2007) *Why Appraisal is not 'Utterly' Useless*

and why it's not the Way to Go either. Retrieved 30 March 2008 from:  
[http://www.digitalpreservationeurope.eu/publications/appraisal\\_final.pdf](http://www.digitalpreservationeurope.eu/publications/appraisal_final.pdf)

Harvey, R. (2008) *Appraisal and Selection*. Retrieved 30 March 2008 from:  
<http://www.dcc.ac.uk/resource/briefing-papers/appraisal-and-selection/>

Appraisal in the digital world was the subject of a recent conference. A framework was established by the DELOS Network of Excellence to think about automating the appraisal process, the rationale behind it being that records for permanent retention should be identified at creation. Many professions would be involved in this process, thus this conference provided an ideal opportunity for a range of experts to get together to assist in building such a methodological framework for the appraisal of digital objects. Papers for this event are available from the Delos website.

Delos NoE Conference: Appraisal in the Digital World, Accademia Nazionale Dei Lincei, Rome, Italy. 15-16 November 2007. Retrieved 30 March 2008 from: [http://www.dpc.delos.info/rethinking\\_appraisal/](http://www.dpc.delos.info/rethinking_appraisal/)

**Ingest:** An article in D-Lib explores the ingest function and the tools they have developed at the Australian Public Record Office Victoria to accession digital objects into the archive. The paper touches on the tasks associated with ingest, for example ensuring an object retains its integrity, and the effective carrying out of any normalisation that is required. The tools and design of the ingest function are described and the special features of the system that are needed in order to ingest large amounts of data.

Waugh, A. (2007). "The Design and Implementation of an Ingest Function to a Digital Archive." *D-Lib Magazine*, 13 (11/12) November/December 2007. Retrieved 30 March 2008 from:  
<http://www.dlib.org/dlib/november07/waugh/11waugh.html>

**Automatic metadata extraction:** A recent paper investigates the approaches to extracting automatically descriptive and semantic metadata from digital objects. The study examines existing tools and related research as well as putting forward its own model which proposes a novel approach: pre-ingest of automated metadata extraction based on genre classification of the digital object.

Ross, S., Kim, Y., and Dobрева, M. (2007), *Preliminary framework for designing prototype tools for assisting with preservation quality metadata extraction for ingest into digital repository* ISBN: 2-912335-39-6

Two further papers examine automated genre classification as a step toward automating metadata extraction from digital documents for ingest into digital repositories such as those run by archives, libraries and eprint services. A DPE briefing paper examines the scope and workflow of automating metadata extraction.

Kim, Y., and Ross, S. (2007), "The Naming of Cats: Automated Genre Classification", *The International Journal of Digital Curation* (2) 1, 2007. Retrieved 30 March 2008 from:  
<http://www.ijdc.net/.ijdc/article/view/24/27>

Kim, Y., and Ross, S. (2007), "Searching for Ground Truth: a Stepping Stone in Automated Genre Classification." In Thanos et al. eds. *Proceedings DELOS Conference on Digital Libraries*. Retrieved 30 March 2008 from:  
<http://www.springerlink.com/content/lt760613m2731723/fulltext.pdf>

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## 2.8 Storage Media

The Library of Congress and the San Diego Supercomputer Centre (SDSC) have released a report on data transfer and storage tests. At the heart of the project was the concept of trust and guaranteeing the integrity of the SDSC to reliably store the Library of Congress's data. The report covers in detail key area of data storage such as the data transfer process, data monitoring and access as well as web archiving.

Anderson, M. et al. (2007) *Data Center for Library of Congress Digital Holdings: A Pilot Project*. Retrieved 30 March 2008 from:  
[http://www.digitalpreservation.gov/pdf/SDSC\\_LC\\_data-storage\\_report\\_2.pdf](http://www.digitalpreservation.gov/pdf/SDSC_LC_data-storage_report_2.pdf) - 22 Sept 08 New report available - see web page

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## 2.9 e-journal Archiving

A recently published paper takes an analytical approach to review nine different current archiving models for scientific journals, including JSTOR, Portico, E-Print Repositories, Open Access Model, LOCKSS, OCLC Digital Archive, JISC PubMed Central and KB e-Depot. Another paper reports on surveys of e-journal archives and institutional repositories of how the community is responding to the challenge of large scale digital archiving and the challenges of stakeholder participation.

Moghaddam, G. (2008) "Preserving scientific electronic journals: a study of archiving initiatives." *The Electronic Library* 2008 (26)1. Retrieved 30 March 2008 from: <http://www.emeraldinsight.com/10.1108/02640470810851761>

Smith, K. (2008) "Institutional Repositories and E-Journal Archiving: What Are We Learning?" *Journal of Electronic Publishing* Winter 2008. Retrieved 30 March 2008 from: <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;cc=jep;rgn=main;view=text;idno=3336451.0011.107>

DPE have published a couple of briefing papers on the benefits of collaboration when preserving institutional digital output, given the vast scale that it is being produced; not one institution can do it all, thus giving rise to preservation models such as Portico and LOCKSS. The issue of access vs. preservation within the context of complex licensing agreements is also explored.

Fenton, E (2007) *Portico: A Collaborative Approach to Preservation* Retrieved 30 March 2008 from:  
[http://www.digitalpreservationeurope.eu/publications/portico\\_briefing\\_paper\\_def.pdf](http://www.digitalpreservationeurope.eu/publications/portico_briefing_paper_def.pdf)

Rusbridge, A (2007) *LOCKSS: Re-establishing Librarians as custodians for journal content*. Retrieved 30 March 2008 from:  
[http://www.digitalpreservationeurope.eu/publications/briefs/lockss-briefing-paper\\_sr.pdf](http://www.digitalpreservationeurope.eu/publications/briefs/lockss-briefing-paper_sr.pdf)

Rusbridge, A. and Ross, S. (2007) "The UK LOCKSS Pilot Programme: A Perspective from the LOCKSS Technical Support Service." *International Journal of Digital Curation*, (2)2. Retrieved 30 March 2008 from: <http://www.ijdc.net/ijdc/article/view/49>

A First Monday article is based on a workshop held in January that examined four different kinds of systems for e-journal archiving. It looks at issues of trust and reliance on commercial software and the importance of interoperability.

Seadle, M. and Greifeneder, E. (2008) "In archiving we trust: Results from a workshop at Humboldt University in Berlin" *First Monday* (13)1. Retrieved 30 March 2008 from: <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2089/1923>

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## 2.10 Tools

**DRAMBORA:** The Digital Curation Centre's DRAMBORA (Digital Repository Audit Method Based on Risk Assessment) tool assists organisations in self-assessment of their repository and helps them identify and manage the risks in their curation activities. The tool represents the ongoing international effort to conceive methodologies for audit and certification of trustworthy digital repositories. The tool is the subject of a number of new articles

The self-assessment process is set out in a short DCC article and there is now an FAQ section on the DCC website, for new users of the tool. This includes how long it takes to use the tool and lists organisations who have already implemented.

A conference paper examines the benefits of the DRAMBORA tool which is designed to facilitate the assessment of digital repositories' risk exposure: it facilitates internal audit by providing repository administrators with a means to assess their capabilities, identify their weaknesses, and recognize their strengths.

Innocenti, P., McHugh, A., Ross, S., and R Ruusalepp (2007) *Risk Management Foundations for DLs: DRAMBORA (Digital Repository Audit Method Based on Risk Assessment)*, DELOS 2nd Workshop on Foundations of Digital Libraries, within ECDL conference, Budapest, Hungary, 20 September 2007. Retrieved 30 March 2008 from: [http://www.delos.info/index.php?option=com\\_content&task=view&id=597&Itemid=328](http://www.delos.info/index.php?option=com_content&task=view&id=597&Itemid=328)

*An Approach to Audit and Certification*. (2007). HATII, University of Glasgow. Retrieved 30 March 2008 from: [http://www.repositoryaudit.eu/participate/docs/DCC\\_and\\_DPE\\_Approach.pdf](http://www.repositoryaudit.eu/participate/docs/DCC_and_DPE_Approach.pdf)

DCC (2007) *Frequently Asked Questions about DRAMBORA*. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/FAQs/self-auditing/>

**DCC DIFFUSE Standards Registry:** This resource provides information on standards for digital preservation. The database is browseable and contains links to tools and all relevant documentation. DIFFUSE can be found at the DCC website.

Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/diffuse/>

**Dioscuri:** Under the umbrella of the European project Planets, the Koninklijke Bibliotheek continued development of Dioscuri, the first modular emulator for digital preservation. A new version of the software has been released in February 2008. This new version is capable of running 32-bit applications like MS Windows 3.0 and has support for a wider range of peripherals. With these new extensions Dioscuri can authentically render old documents and programs from DOS and early Windows era. More information can be found at the Dioscuri website. Retrieved 30 March 2008 from: <http://dioscuri.sourceforge.net>

An update article on the Dioscuri tool is also available in DLib.

Van der Hoeven, J. (2007) 'Dioscuri: emulator for digital preservation' *DLib* (13) 11/12 November/December 2007. Retrieved 30 March 2008 from: <http://www.dlib.org/dlib/november07/11inbrief.html#VANDERHOEVEN>

**DatKeurmerk:** The first stage of this 'seal of approval' tool has become available for use by social sciences and humanities researchers. The tool is developed by the Dutch Data Archiving and Networked Services (DANS) and contains seventeen guidelines that data producers, data consumers and data archives must follow in order to merit the label 'future-proof'. DANS intends to publicise the Datakeurmerk widely and evoke responses in order to create support for it. More information can be found from the tool's website. Retrieved 30 March 2008 from: <http://www.datasealofapproval.org/>

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## 2.11 Film preservation

The film community in the US has had some interesting debates about the long term preservation of digital film. The Academy of Motion Picture Arts and Sciences published a report in November 2007 (not yet available online) about how to tackle the problem of long term digital archiving in the industry; the report includes case studies of films that are entirely digital and how this impacts on future preservation. It also touches on recent research in the field. The New York Times also recently published an article as a result of the above report, highlighting the risks of the film industry moving entirely to digital production. It quotes costs for the digital preservation of a "born digital" film as opposed to the lower cost of preserving traditional film.

Cieply, M. (2007) "The Afterlife is Expensive for Digital Movies" *The New York Times*, 23 December, 2007. Retrieved 30 March 2008 from: [http://www.nytimes.com/2007/12/23/business/media/23steal.html?\\_r=1&h&emc=th&oref=slogin](http://www.nytimes.com/2007/12/23/business/media/23steal.html?_r=1&h&emc=th&oref=slogin)

*The Digital Dilemma: Strategic Issues in Archiving and Accessing Digital Motion Picture Materials* Fall, 2007. Science and Technology Council of the Academy of Motion Picture Arts and Sciences. not available online yet, but see the Academy's website for more information. Retrieved 30 March 2008 from: [http://www.oscars.org/council/digital\\_dilemma.html](http://www.oscars.org/council/digital_dilemma.html)

Another article considers the rise in online video and archiving procedures. It takes into account the concept of creators of image collections who may be located



outside the boundaries of memory institutions who are traditionally responsible for their longevity. These creators might establish their own digital archives in internet environments such as YouTube.

Gracy, K. (2007) "Moving Image Preservation and Cultural Capital" *Library Trends* 56(1), Summer 2007. *N.b this article is available to Muse online journal subscribers only.* Retrieved 30 March 2008 from:  
[http://muse.jhu.edu/journals/library\\_trends/toc/lib56.1.html](http://muse.jhu.edu/journals/library_trends/toc/lib56.1.html)

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### 3. Other publications

The OpenDoc Society was launched in October 2007. The organisation is member-based and promotes and supports the Open Document Format, an ISO-standardised, vendor neutral file format, which a number of world-wide organisations, including governmental, are moving towards using. More information can be found the OpenDoc website. Retrieved 30 March 2008 from:  
<http://www.opendocsociety.org/>

On the same theme, an article on open office file formats is available via the JISC website. These new formats don't come without controversy and this paper explains some of the recent developments and indicates that the development of open file formats is now at a crucial stage of development.

Ditch, W. (2007) *XML-based Office Document Standards (TSW0702)*. Retrieved 30 March 2008 from:  
[http://www.jisc.ac.uk/whatwedo/services/services\\_techwatch/techwatch/techwatch\\_ic\\_reports2005\\_published.aspx](http://www.jisc.ac.uk/whatwedo/services/services_techwatch/techwatch/techwatch_ic_reports2005_published.aspx)

A book has been published offering principles for effective environmental data management, including preservation. It is a comprehensive overview of the challenges that environmental data collectors face and a structured account of how they might apply the principles put forward.

*Environmental Data Management at NOAA: Archiving, Stewardship and Access*. Committee on Archiving and Accessing Environmental and Geospatial Data at NOAA, National Research Council. 2007. Available freely online. Retrieved 30 March 2008 from:  
[http://www.nap.edu/catalog.php?record\\_id=12017](http://www.nap.edu/catalog.php?record_id=12017)

Oya Rieger's paper "Preservation in the Age of Large-Scale Digitization" discusses the impact of large-scale digitisation and possible preservation strategies in the light of the increasing number of digitisation projects that are primarily driven by access considerations. The author touches on quality control issues and digitisation requirements. The report is available from the Council on Library and Information Resources (CLIR) website.

Rieger, O. (2008) *Preservation in the Age of Large-Scale Digitization. A White Paper*. CLIR Publication No 141. Council on Library and Information Resources, Washington, DC. Freely available online from the CLIR website. Retrieved 30 March 2008 from:  
<http://www.clir.org/pubs/reports/pub141/pub141.pdf>

A new blog has been started by the University of London Computing Centre [ULCC] to discuss preservation issues. 'DaBlog' is available via the ULCC website. Retrieved 30 March 2008 from: <http://dablog.ulcc.ac.uk/>

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## **4. Events**

### **4.1 Recent events**

**11<sup>th</sup> European Conference on Research and Advanced Technology for Digital Libraries (ECDL) Conference, 16-21 September 2007, Budapest, Hungary.**

Presentations available from the ECDL website. Retrieved 30 March 2008 from: <http://www.ecdl2007.org/index.php>

**DPE, PLANETS and Caspar Second Annual Conference: Progress towards Addressing Digital Preservation Challenges, 5-6 September 2007, Instituto dos Arquivos Nacionais, Torre do Tombo Lisbon, Portugal.**

Presentations available from WePreserve website. Retrieved 30 March 2008 from: <http://www.wepreserve.eu/events/fp6-2007/>

A write up of this event can be found in Ariadne.

Hockx-Yu, H. (2007) 'Progress towards Addressing Digital Preservation Challenges' *Ariadne* (53) October 2007. Retrieved 30 March 2008 from: <http://www.ariadne.ac.uk/issue53/fp6-2007-rpt/>

**Libraries without Walls 7: Exploring 'anytime, anywhere' delivery of library services. 14-18 September 2008. Lesvos, Greece.**

Presentations available from conference website. Retrieved 30 March 2008 from: <http://www.cerlim.ac.uk/conf/lww7/programme.php>

**Principles of Digital Preservation: a hands on approach' 1-5 October 2007. Vilnius, Lithuania.**

Presentations available from WePreserve website. Retrieved 30 March 2008 from: <http://www.wepreserve.eu/events/dpe-planets-vilnius-2007/>

**PV2007: "Ensuring the Long-Term Preservation and Value Adding to Scientific and Technical Data," 9-11 October 2007, Oberpfaffenhofen/Munich, Germany.**

Presentations available from conference website. Retrieved 30 March 2008 from: <http://www.pv2007.dlr.de/index.htm>

**International conference on Preservation of Digital Objects (IPRES 2007): "Digital Preservation: Sustainable Programs and Best Practice," 11-12 October 2007, Beijing, China.**

Presentations available from conference website. Retrieved 30 March 2008 from: <http://ipres.las.ac.cn/program.jsp>

**"Tools and Trends International Conference on Digital Preservation at the occasion of the retirement of Johan Steenbakkers," 1-2 November 2007, The Hague, the Netherlands.**

Conference presentations available from the KB website. Retrieved 30 March 2008 from: <http://www.kb.nl/hrd/congressen/toolstrends/programme-en.xml>

**3<sup>rd</sup> International Digital Curation Conference: "Curating our Digital Scientific Heritage: a Global Collaborative Challenge," 12-13 December 2007, Renaissance Washington Hotel, Washington DC, USA.**

Full programme presentations available at the DCC website. Retrieved 30 March 2008 from: <http://www.dcc.ac.uk/events/dcc-2007/>

**NISO Digital Preservation Forum: Planning Today for Tomorrow's Resources. 14 March 2008. Washington DC, USA.**

Retrieved 30 March 2008 from: <http://www.niso.org/news/events/2008/digpres08/agenda/>

**DCC/RIN Research Data Management Forum – Inaugural workshop. 19-20 March 2008, Manchester.**

<http://www.dcc.ac.uk/events/data-forum-2008/>

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## **4.2 Current and Forthcoming events**

### *April*

"Open Repositories Conference 2008: The third international conference on open repositories." 1-4 April 2008. Southampton, UK. Retrieved 30 March 2008 from: <http://or08.ecs.soton.ac.uk/>

"What to preserve? Significant properties of Digital Objects." 7 April 2008. British Library, London, UK. Retrieved 30 March 2008 from: <http://www.dpconline.org/graphics/events/080407workshop.html>

### *May*

TAPE Workshop on the curation and preservation of audiovisual collections. UK. 12-16 May 2008. University of Glasgow. Retrieved 30 March 2008 from: <http://www.hatii.arts.gla.ac.uk/news/tape.html>

Access to Archival Heritage; International Symposium. 16 May 2008. Netherlands, location not yet announced. Retrieved 30 March 2008 from: <http://www.archiefschool.nl>

IASSIST 2008 Technology of Data: Collection, Communication, Access and Preservation. May 27-30 2008. Stanford University, Palo Alto, California,

USA. Retrieved 30 March 2008 from: <http://stanford.edu/group/ADS/cgi-bin/drupal/>

## *June*

ETD 2008 "Spreading the Light: 11<sup>th</sup> International Symposium on Electronic Theses and Dissertations." 04 - 07 Jun 2008, Aberdeen Scotland (United Kingdom). Retrieved 30 March 2008 from: [http://www2.rgu.ac.uk/library\\_edocs/etd08/home.htm](http://www2.rgu.ac.uk/library_edocs/etd08/home.htm)

Association of Canadian Archivists Annual Conference. "Stemming the Tide: Archives and the Digital World." 11-14 June. Fredericton, New Brunswick, Canada. Retrieved 30 March 2008 from: <http://www.archivists.ca/conference/>

Joint Conference on Digital Libraries [JCDL 2008] 16-20 June 2008 Pittsburgh, Pennsylvania, USA. Retrieved 30 March 2008 from: <http://www.jcdl2008.org/>

LIFE2 Project Conference. 23 June 2008. British Library, London, UK. Retrieved 30 March 2008 from: <http://www.life.ac.uk/2/>

IS&T and the Imaging & Media Lab of the University of Basel "Archiving 2008". 24-27 June 2008. Bern, Switzerland. Retrieved 30 March 2008 from: <http://www.imaging.org/conferences/archiving2008/>

## *July*

The JISC/CNI Meeting: Transforming the User Experience. 10-11 July 2008. Manchester, UK. <http://www.ukoln.ac.uk/events/jisc-cni-2008/>

## *August*

World Library and Information Congress: 74<sup>th</sup> IFLA General Conference and Council. "Libraries without borders: Navigating towards global understanding" 10-14 August 2008, Quebec, Canada. Retrieved 30 March 2008 from: <http://www.ifla.org/IV/ifla74/index.htm>

2008 Annual Conference of the Australian Society of Archivists. 6-9 August 2008. Perth, Western Australia (Australia). Retrieved 30 March 2008 from: <http://www.archivists.org.au/2008-conference-perth>

## *September*

Workshop E-Government and Digital Archives. 11 September 2008. Munich, Germany. Retrieved 30 March 2008 from: <http://www.hauptstaatsarchiv.hessen.de/egovda>

12th European Conference on Research and Advanced Technology for Digital Libraries (ECDL2008) 14-19 September 2008. Aarhus, Denmark. Retrieved 30 March 2008 from: <http://www.ecdl2008.org>

IWAW 2008: 8th International Web Archiving Workshop  
18 - 19 Sep 2008, Aarhus Denmark (Denmark). Retrieved 30 March 2008  
from: <http://www.iwaw.net/08/>

CIDOC 2008. The Annual Conference of the International Documentation  
Committee of the International Committee of Museums: "The Digital  
Curation of Cultural Heritage" 15 - 18 Sep 2008, Athens, Greece (Greece).  
Retrieved 30 March 2008 from: <http://www.cidoc2008.gr/>

DC 2008 – International Conference on Dublin Core and metadata  
applications. "Metadata for Semantic and Social Applications" 22-26  
September 2008. Berlin, Germany. Retrieved 30 March 2008 from:  
<http://dc2008.de/>

International Conference on the Preservation of Digital Objects (ipres2008).  
29-30 September 2008. British Library, London, UK.

#### *November*

Globalisation and the Management of Information Resources. 12-14  
November 2008, Sofia, Bulgaria. Retrieved 30 March 2008 from:  
<http://slim.emporia.edu/globenet/Sofia2008/index.htm>

#### *December*

4<sup>th</sup> International Digital Curation Conference. 1-3 December 2008.  
Edinburgh, Scotland. Retrieved 30 March 2008 from:  
<http://www.dcc.ac.uk/events/dcc-2008/>

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### **4.3 Training Events**

#### *April*

Digital Futures "From digitisation to delivery" King's College London 5-day  
training event. 7-11 April 2008. London, UK. Retrieved 30 March 2008 from:  
<http://www.digitalconsultancy.net/digifutures/>

The University of Arizona runs a new Graduate Certificate Programme in  
Digital Information Management. More information on the course can be  
found from the University's website. The preservation of Digital Collections  
module is run in Spring. Retrieved 30 March 2008 from:  
<http://sir.arizona.edu/digin/>.

The State Academy of Fine Arts in Stuttgart, Germany Graduate Programme  
[MA] "Conservators for New Media and Digital Information" covers many  
preservation issues such as the long-term preservation of photographs,  
video records and digital objects in museums, libraries and archives.  
Retrieved 30 March 2008 from: [http://www.mediaconservation.abk-stuttgart.de/home\\_e.htm](http://www.mediaconservation.abk-stuttgart.de/home_e.htm)

"Planning the future with Planets: a preservation planning tutorial", 14-15  
April 2008. Austrian Computer Society, Vienna, Austria. Retrieved 30 March  
2008 from: <http://www.planets-project.eu/events/pp-vienna-2008/>

*May*

OCLC is holding a digital preservation webinar which will focus on selection the most appropriate preservation strategies. More information is available from the OCLC website. Retrieved 30 March 2008 from:

<http://www.oclc.org/western/training/courses/descriptions/W385.htm>

*October*

*Web Archiving Training Session*, 16-17 October 2008, Paris. France. More information is available from the European Archive Wiki. Retrieved 30 March 2008 from:

<http://service.europarchive.org/confluence/display/PU/Web+Archiving+Training+Session>

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