Governance and Recordkeeping
Around the World

Digital Storage Meets DNA

Contents

Governance and Recordkeeping Around the World, an online newsletter published regularly by Library and Archives Canada (LAC), highlights issues pertaining to government and recordkeeping practices in the public and private sectors.

The content of the newsletter is intended for information purposes only and does not necessarily reflect the views and opinions of Library and Archives Canada.

Some links in this document lead to sources which are not subject to the Official Languages Act and are available in the language in which they were written.

Please note that, after a period of time, links to certain articles in the newsletter may become inactive.

The newsletter Home Page is at: http://www.bac-lac.gc.ca/eng/Pages/GRB-Newsletter/governance-recordkeeping-newsletter.aspx

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Section 1—General News

Canada

British Columbia
[Government wants to modernize Freedom of Information](#)

> One of the goals of the B.C. Government in 2013 is to modernize the Freedom of Information process through updated computer software.

Federal Government
[Government's first Google Hangout session](#)

> The government wants feedback on how to further expand its [Open Data Portal](#) functions. The Google Hangout session, and [video](#), brought together panelists online to discuss how government can provide citizens with user-friendly data.

Prince Edward Island
[Municipalities may soon be subject to Freedom of Information Act](#)

> The provincial government of Prince Edward Island is considering having its municipalities subject to the *Freedom of Information Act*. As of the beginning of 2013, P.E.I. is the only Atlantic province whose municipalities are not obliged to comply with this legislation.
> Update: http://www.cbc.ca/news/canada/prince-edward-island/story/2013/05/06/pei-freedom-information-cities-upei-584.html

Asia
[National Libraries respond to the challenges of the digital era](#)

> Libraries are taking steps to adapt to the digital environment. One step has been to agree to a proposal that establishes a long-term co-operative relationship among national libraries in Asia which emphasizes, among other things, the sharing of resources.

Australia
[Victorian government releases ICT strategy](#)

> The [ICT strategy](#) covering 2013 and 2014 addresses issues including cloud computing and appointing a whole-of-government Information and Communication Technology Chief.
> See also: [Chief Technology advocate appointed](#)

Chile
[Government instructs agencies to publish their data on portal](#)

> The government of Chile has published an Open Government Presidential Directive that establishes an open data policy and instructs government institutions to publish their open government data and information on a [portal](#).

Europe
European film collections are not being fully digitized

According to a recently released European Commission report, the majority of European film heritage institutions are not digitizing their collections. In fact, just 1.5 percent of European film heritage is currently being digitized.

India
Government wants to establish a paperless department

The government of India is working toward establishing one department where electronic filing (paperless) is the standard. A government spokesperson says that there must be collaboration among departments to achieve this goal.

Ireland
National Library of Ireland enters YouTube era

YouTube has come to the National Library of Ireland. The Library announced that it is using this channel to promote its services.

Luxembourg
Government introduces electronic archiving bill (French only)

The main objectives of the bill include the preservation of documents in digital form.

Malaysia
National Archives Act under review

The government of Malaysia is reviewing the National Archives Act to ensure that historical documents are being preserved.

Scotland
National Library Act is in effect

The National Library of Scotland Act 2012 came into effect on February 1, 2013 with the goal of modernizing the functions and governance of the National Library of Scotland.

United Kingdom
Government creates Chief Technology Officer position

With the global emphasis on digitization, the government of the United Kingdom has created a new position: Chief Technology Officer (CTO). The duties of the CTO include coordinating technology strategies across government departments and coming up with new technologies that can be used to deliver public services digitally.

United States

Federal Government

Changes recommended to Federal Government's security classification system

The Public Interest Declassification Board has released its report with 14 recommendations for transforming the Federal Government's security classification system. The Board also advises that the President appoint a White House Steering Committee to lead the reform effort. See also: Audio Interview: Changing how agencies manage documents

NARA has its first Chief Innovator Officer

The National Archives and Records Administration (NARA) has a Chief Innovation Officer. Pamela Wright was appointed to the position on December 2, 2012 and will lead NARA in developing innovative ways to share its historical documents and records with the public.

Supreme Court hears "residents only" FOIA case

The Freedom of Information Act (FOIA) has the United States Supreme Court's undivided attention. The Court will rule whether residents in one state have the right to use the FOIA to obtain documents in another state.
Update: http://www.timesdispatch.com/news/local/henrico/supreme-court-rules-va-can-deny-out-of-state-foia/article_00030189-97b3-5b20-9dfd-750ec82e06d5.html

State Government

Indiana
Standard must be met to access public email

The Indiana Court of Appeals has ruled that requests for access to public emails must be "reasonably particular" as to the type of email being asked for. If a request does not conform to this standard, it could be denied.

Mississippi
Bill amended to remove special electronic formats requirement

A provision in a public records bill that would have required state local governments to make records available to requesters in an electronic format they specified has been removed. A section that would prevent the government from charging more than a reasonable fee for searching, providing and copying public records was retained.

Section 2—Events

Annual Meetings and Conferences

International

September 2013

[DCMI International Conference on Dublin Core and Metadata Applications DC-2013](#)

"Linking to the Future"

The conference will explore questions regarding the persistence, maintenance, and preservation of metadata and descriptive vocabularies.

Hosted by DCMI (Dublin Core Metadata Initiative), 2–6 September 2013
Lisbon, Portugal

[8th International Conference on Digital Information Management (ICDIM 2013)](#)

The goal of the conference is to bring people in academia, research laboratories and industry together, and offer a collaborative platform to address the emerging issues and solutions in digital information science and technology.

Hosted by the Islamia University Bahawalpur, 10–12 September 2013
Islamabad, Pakistan

[17th International Conference on Theory and Practice of Digital Libraries](#)

"Sharing meaningful information"

This conference, a scientific forum on digital libraries, brings together researchers, developers, content providers and users in the field of digital libraries.

Hosted by the University of Malta, 22–26 September 2013
Valletta, Malta

October 2013

2013 Australian Society of Archivists Inc. National Conference

"Archives: the future. Exploring the environment and possibilities for records and recordkeeping"

Conference details to follow.

Hosted by the Australian Society of Archivists Inc., 16–17 October 2013
Canberra, Australia

ARMA 2013: 58th Annual Conference and Expo

Conference details to follow.

Hosted by ARMA International, 28–30 October 2013
Las Vegas, Nevada, United States

National

October 2013

GTEC 2013

Conference details to follow.

7–10 October 2013
Ottawa, Ontario, Canada

Public Sector Social Media 2013

Conference details to follow.

Hosted by The Conference Board of Canada, October 2013 *(Specific date to be announced)*
Ottawa, Ontario, Canada

Section 3—Current Trends and Products

Recordkeeping: Current Developments, Projects and Future Initiatives

Canada
Federal Government—Library and Archives Canada—Modernization Initiative

> In a document entitled "Meeting Challenges of the Future: From Reflection to Action" Daniel J. Caron, Deputy Head and Librarian and Archivist of Canada, discusses Library and Archives Canada's modernization initiative.

Western University—Sustainable Archaeology

> Sustainable Archaeology is a research initiative that combines three-dimensional (3D) artifact digitization and computer generated imagery (CGI) to achieve the long-term preservation and digital archiving of Ontario's archaeological heritage.

Australasia
Ongoing Projects

> The National and State Libraries Australasia are undertaking a number of projects addressing topics such as digital collection, digital preservation and storage management.

Australia
National Library—Digital Library Infrastructure Replacement (DLIR) Project

> DLIR will redevelop the National Library's digital infrastructure to enable it to digitize its content and place it online. The project is expected to be completed by 2015.

Europe
European Cloud Partnership

> The European Cloud Partnership was created as part of the European Cloud Strategy with the goal of establishing a digital single market for cloud computing in Europe.

France
« Mémoires partagées » (French only)

> L'Institut national de l'audiovisuel has launched « Mémoires partagées » ("Memories Shared"), an initiative to find and make available audiovisual collections that were part of the personal archives of the French people.

Germany

Deutsche Digitale Bibliothek (DDB)

> The DDB (German Digital Library) is now online with the goal of connecting all of Germany's cultural and scientific institutions together with its digitized inventories and integrating them into the European digital library, Europeana.
> See also: Video

National Library—Digitizing At Risk Books

> Books, over time, are at risk of acid corrosion and their paper becoming brittle. In response, the German National Library has undertaken a project to digitize its at-risk books. Over one million pages will be processed by the end of the project.

Ireland

Bureau of Military History Website

> The website is dedicated to military history in Ireland from 1913–1921. This project was undertaken by the Defence Forces Military Archives, in collaboration with the National Archives of Ireland. Over 35,000 pages, 42 sets of photographs and 13 voice recordings were digitized. A video was also produced.

Cloud Competency Centre

> National College of Ireland's new Cloud Competency Centre's goal is to address cloud skills in Ireland and globally.

Israel

Antiquities Authority Project

> Digital imaging technology was used to scan thousands of ancient parchment fragments from the Dead Sea Scrolls, which are now accessible online. As of early 2013, it is expected that all of the fragments will be scanned in three years.
> See also: Press Release; Video

United Kingdom

British Library—National Newspaper Archive Building

> A new building has been constructed to hold one of the world's largest newspaper collections, which consists of approximately 290,000 bound volumes containing 750 million pages of newsprint, with robotic shelving.
> See also: Video; Pictures

[University of Southampton—Data Pool Project](#)

The [University of Southampton](#) is developing research data management services, and has established a [10-year roadmap](#) to guide this process. The goal of the Data Pool Project is to build capacity within the university to support effective data management practice across all disciplines, including multidisciplinary activity, throughout the data lifecycle.

United States

[Carnegie Mellon University—Preservation of Executable Content](#)

The process has begun to develop Olive, the first archiving system to preserve executable content. The goal of the project is to have a global archive of curated virtual machine (VM) images that can be shared, searched, extended, and executed via the Internet.

[Library of Congress—National Recording Preservation Plan](#)

The [Library of Congress](#) has released its [National Recording Preservation Plan](#). The plan makes 32 short- and long-term recommendations, focusing on both the public and private sectors, with the goal of preserving the nation's audio heritage.
See also: [Audio Interview](#); [Protecting Audio Recordings](#)

[National Archives and Records Administration (NARA)—Declassification Portal](#)

The Declassification Portal provides a single point of access for declassification actions taking place at NARA.

[State Archives of North Carolina—Travelling Archivist Program (TAP)](#)

The TAP encourages best practices in collection preservation and access by providing on-site assistance, a collections assessment, recommendations for managing and caring for the collections, and staff training to institutions that preserve North Carolina's history and culture.

[Tufts University—LiAM: Linked Archival Metadata Project](#)

Describing complex archival collections remains a challenge to archivists. At [Tufts University](#) this challenge is being addressed through the LiAM project. The goal of the project is to use linked data and the Web to design a new approach to archival metadata.

[University of Denver—Digital Pioneers Project](#)

The Digital Pioneers project documents early innovations in the use of digitization in libraries, museums, archives, and historical societies in the words of the people who played key roles.

Products and Tools from Around the World

Canada

Capital Regional District (British Columbia)—Infolinx Web Solution (Case Study)

> This solution manages the entire lifecycle of paper-based records of the Capital Regional District in British Columbia. It offers benefits such as solution architecture support for the provincial records retention schedule standard, including primary and secondary classifications.

Federal Government—Office of the Privacy Commissioner
"myPRIVACYapp"

> This mobile application is designed to educate users on how to better protect personal information on their mobile devices.

Australia

Government of New South Wales—"Digitizing your collection blog series" [PDF]

> The government of New South Wales has produced this five-part series.

National Archives—"Risks to digital continuity"

> The National Archives of Australia has produced this advice document identifying potential risks to the continuity of digital information and suggesting possible approaches to address the risks.

Nuix—e-Discovery software: Version 4.2

> Version 4.2 includes an open and defensible predictive coding engine, a manual, and automated keyword-based redaction of sensitive information.

Denmark

xcorrSound Tool Package (Audio-Visual Asset Management Tool)

> Developed at the Danish State and University Library, this suite of three tools assists organizations in managing digital audio assets.

France

Guidance Documents on Digital Archiving [PDF] (French only)

> Le Service interministériel des archives de France has released guidance documents on digital archiving.

South Africa

[MFiles 9.0](#)

>This solution uses metadata to deliver enterprise content management capabilities, including automated replication of documents and other content, between repositories located on premise and in the cloud.

United Kingdom

["Anonymisation: managing data protection risk code of practice"](#) [PDF]

>The [Information Commissioner's Office](#) has released a new data protection code of practice. The code provides practical advice to organizations that need to convert personal data into a form in which individuals are no longer identifiable. A [video](#) has been released.

[Information and Records Management InfoKits](#)

>[JISC](#), has produced InfoKits entitled ["Records Management,"](#) ["Managing your email"](#) and ["Managing information to make life easier](#)."

United States

[Laserfiche—Records Management Edition (ECM System)—(Case Study)](#)

>The [Jackson County Oregon records office](#) was overflowing with paper records that had to be searched and retrieved. The office needed an electronic content management (ECM) system that could satisfy the many different needs of users and eliminate manual paper processes.

[National Archives and Records Administration (NARA)—"Managing Content on Shared Drives"](#)

>This instructional video outlines the records management implications and challenges, agency responsibilities, and benefits of organizing and managing content stored on shared drives.

[Saint Louis University—Transcription for Paleographical and Editorial Notation (T–PEN)](#)

>Coordinated by the [Center for Digital Theology](#) at [Saint Louis University](#) T–PEN is a Web-based tool for working with images of manuscripts. A [video](#) has been produced.

[State Archives of Florida—"Protect Your Newspapers and Clippings"](#)

>[The State Archives of Florida](#) has produced a guidance document on steps that can be taken to extend the life of newspapers and clippings.

Studies and Surveys

Europe
"Survey Report on Digitisation in European Cultural Heritage Institutions 2012" [PDF]

Authors: Natasha Stroeker and René Vogels Panteia on behalf of the EUMERATE Thematic Network

> This is the first report on the state of digitization in Europe's cultural heritage institutions.
>
> The report is based on nearly 2000 "core" survey responses, from 29 European countries.
>
> The survey asked questions regarding the state of digitization activity, access to digital collections, the digital preservation strategy, and the expenditure of digitization.

United Kingdom and Ireland
"The UK/Ireland Survey of Special Collections and Archives: Outcomes and Perspectives" 2012

> OCLC Research and Research Libraries UK (RLUK) collaborated to survey library special collections holdings and practices of RLUK members and OCLC Research Library Partnership institutions in the United Kingdom and Ireland.
>
> A video was also produced.

United States
"National Digital Stewardship Alliance Web Archiving Survey Report" 2012 [PDF]

Produced by: The National Digital Stewardship Alliance Content Working Group

> Organizations in the United States that are actively involved in, or planning to start, programs to archive content from the Web were the focus of this survey.
>
> The goal of the survey was to better understand Web archiving activities in the United States, including the identification of organizations or individuals involved, the types of Web content being preserved, the tools and services being used, and the types of access being provided.

Digital Storage Meets DNA

This special section of the newsletter summarizes the work scientists are undertaking with DNA and the storage of digital information.

Research is under way that could solve the problem of storing the increasing amount of data being created globally. Say hello to DNA. Deoxyribonucleic acid (DNA) has characteristics that are ideal for long-term storage and data archiving: very small, dense, durable and recoverable. In the latest research, Nick Goldman and colleagues at the European Bioinformatics Institute have stored digital information by encoding it in the four different bases that make up DNA.

The Process

Digital information, made up of five data files, was encoded into DNA no larger than a speck. Then machines "read" the DNA and decoded the information, approximately a megabyte's worth of data, consisting of text, images and a speech. A megabyte can store approximately 500 pages of text. Scientists say that this is a step toward a digital archival storage medium that could store massive amounts of data.

Previous Research

The current research project conducted at the European Bioinformatics Institute follows similar research carried out in 2012 by a team at the Wyss Institute for Biologically Inspired Engineering at Harvard University. The Wyss Institute team encoded an entire 54,000-word book in strands of DNA.

Looking Toward The Future

The longer information is required to be stored, the more useful DNA becomes. DNA as a data-storage medium has disadvantages, such as the slow speed at which the data can be read and the cost involved. However, the alternatives to DNA storage, such as magnetic tapes, hard disks and DVDs, have their own drawbacks. They can degrade relatively quickly, become obsolete, need to be periodically rewritten, and require a constant supply of electricity that can be very expensive.

In the near term, this technology is useful for large archives such as national historical records or huge library holdings. As for the long term, the possibilities are endless.

European Bioinformatics Institute: Digital files and DNA; Archives stored in DNA; The next digital storage medium; Digital information safe for centuries; ; Sonnets and DNA; Storage and Double Helix

Wyss Institute: 700 terabytes in a single gram of DNA (with video); Storing 70 billion books

Section 4—Selected Readings and Recordings

Articles, White Papers, Presentations, Reports, Videos and Podcasts

Canada

Article: « Des trésors de papier au bout des doigts » (French only)

Written by: Isabelle Paré, *Le Devoir*, November 17, 2012.

The article profiles the Bibliothèque et Archives nationales du Québec and its rare book collection as well as the rare books and manuscripts section at the McLennan Library at McGill University.

Article: "Putting Vancouver's History Online"

Written by: Frances Bula, featured in *The Globe and Mail*, December 31, 2012.

The article profiles the City of Vancouver Archives.

Videos: Canadian Archives, 2012.

These videos profile the Alberta Provincial Archives and the Simon Fraser University Archives.

Australia

Paper: "*PANDORA* past, present, and future—national web archiving in Australia" [PDF]

Written by: Dr Paul Koerbin, Manager Web Archiving, National Library of Australia, at the Seminar Kebangsaan Sumber Electronik Di Malaysia on December 6, 2012.

This paper includes transcript and presentation slides, gives an overview of the National Library of Australia's PANDORA Archive and considers current issues and future directions. Additional topics include what can be learned through practical experience in Web archiving and the importance of Web archiving.

India

Article: "Parchment to Pixels"

Written by: Imtiaz Ahmad, Director of the Oriental Public Library, featured in *The Indian Express*, August 15, 2012.

In this article, the author talks about the digitization of books, manuscripts, journals and rare documents undertaken by various libraries.

New Zealand

Presentations from the 2012 ALGIM Records Management Symposium [PDF]

The Association of Local Government Information Management (ALGIM) Symposium was held in New Zealand on July 23 and 24, 2012. It included presentations from Archives New Zealand.

South Africa

Article: "Unstructured data spirals out of control"

> Written by: Admire Moyo, Enterprise Marketing Manager at Dell South Africa, featured in *ITWeb*, March 14, 2012.
>
> In this article, the author highlights the challenges that the South African storage industry is encountering regarding unstructured data.

2012 South African Society of Archivists Conference Papers [PDF]

> The conference was held in Pretoria, South Africa, from July 11 to 13, 2012.

United Kingdom

Reports on the Preservation of Complex Objects Symposia (POCOS) project [PDF]

> Written by: JISC, 2012.
>
> The Preservation of Complex Objects Symposia (POCOS) project delivered a series of three symposia where leading researchers and practitioners presented their findings, identified key unsolved problems, and spoke about the future research agenda for the preservation of complex materials and environments. Two reports, "The Preservation of Complex Objects" volume 1, "Visualisations and Simulations" and volume 2, "Software Art" have been released.

Report: Digital Preservation Coalition Technology Watch Report 12-03; "Digital Forensics and Preservation" [PDF]

> Written by: Jeremy Leighton John, British Library, November 2012.
>
> This report provides a broad overview of digital forensics and focuses on the application of digital forensics to the curation of personal digital archives.

United States

White Paper: "Orphan Works and the Search for Rightholders: Who Participates in a 'Diligent Search' under Present and Proposed Regimes?" [PDF]

> Written by: David R. Hansen, Gwen Hinze and Jennifer M. Urban, School of Law, University of California, Berkeley, January 28, 2013.
>
> This paper examines in detail the core schemes for identifying rightsholders among the leading orphan works regimes and proposals.

Paper: "Digital Preservation of Newspapers: Findings of the *Chronicles in Preservation* Project"

> Written by: Katherine Skinner, Educopia Institute, Matt Schultz, MetaArchive Cooperative, Martin Halbert and Mark Phillips, University of North Texas, October 2012. [PDF]
>
> This paper describes the research led by the Educopia Institute regarding the preservation needs for digitized and born-digital newspapers.

Panel Sessions (Video): "Moving up to the cloud"

        Hosted by Virginia Commonwealth University (VCU) Libraries, January 9, 2013.

        The goal of the panel discussions was to assist other libraries to prepare for the next generation of library technologies and to discuss how emerging cloud-based technologies are transforming research libraries. VCU Libraries also have implemented Alma, a cloud-resident enterprise library software.

Article: "Preserving the U.S. Constitution might be easier than preserving electronic records"
        Written by: Lillie Beth-Brinkman, featured in *NewsOK,* January 8, 2013.

        This article highlights the challenges the National Archives and Records Administration, and its Electronic Records Archives, face as it organizes, preserves, manages and makes accessible its collection of electronic records.

Article: "E-discovery: How a records management policy can save you time and money"
        Written by: James Bernard, Michael Quartararo, Jason Vinokur, Litigation Practice Group at Stroock & Stroock & Lavan LLP, featured in *InsideCounsel*, September 4, 2012.

        Some organizations are slow to implement records management policies while others have non-existent or inadequate policies. The authors discuss the benefits of implementing records management policies.

Audio Interview with Miriam Nisbet, Director, Office of Government Information Services (OGIS)
        January 29, 2013.

        OGIS Director Miriam Nisbet discusses the legal and practical questions behind filing Freedom of Information requests, and what can be expected from both federal and local authorities.

Report: "The Five Daunting Problems Facing Ediscovery" [PDF]
        Published by Kroll Ontrack, January 2013.

        This report describes the most significant ediscovery challenges in the legal technologies market in the next three to five years.

Presentations from NARA's 24th Annual Records Administration Conference [PDF]

        The National Archives and Records Administration (NARA) hosted this conference on September 25, 2012.

Books

Selected Readings

Richard Hess, Joe Iraci, and Kimberley Flak, The Digitization of Audio Tapes, 2012.

> Many archives and heritage institutions manage audio tapes, which are the only record of culturally significant information. However, these tapes do not last indefinitely. Therefore, if the information is to remain accessible, it must be migrated to new technology. *The Digitization of Audio Tapes* provides information and procedures for digitizing cassettes and reel-to-reel tapes.

Managing Electronic Resources: A LITA Guide, 2012.

> *Managing Electronic Resources: A LITA Guide* provides advice on the tools and best practices to assist in the management of electronic resources while saving time, effort, and money. Topics include how to track and assign staff tasks electronically, accumulate and assimilate information from departmental and interdepartmental meetings, manage email and written correspondence as well as applications and software.

Sibyl Schaefer, Janet M. Bunde, J. Gordon Daines and Daniel A. Santamaria, Archival Arrangement and Description, 2012. [PDF]

> *Archival Arrangement and Description* is the first installment in the new modular series TRENDS IN ARCHIVES PRACTICE and includes three modules. The modules cover three areas of evolution: the necessity to understand and use a range of descriptive standards to facilitate intellectual control and to improve access; the development of techniques to process born-digital or electronic records; and the methods used to make descriptive information about archives, and archival materials themselves, accessible via the Internet. There is also a print version available.

Mingquan Zhou, Guohua Geng and Zhongke Wu, Digital Preservation Technology for Cultural Heritage, 2012.

> *Digital Preservation Technology for Cultural Heritage* discusses the technology and processes in digital preservation of cultural heritage. Five major areas are explored in depth: digitization of cultural heritage; digital management in the cultural heritage preservation; restoration techniques for rigid solid relics; restoration techniques for paintings; and digital museum. Also included are application examples for digital preservation of cultural heritage.