

Preserving our digital culture for the future: Overcoming obstacles through collaboration

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Introduction: Cultural heritage on the international agenda

Access to cultural heritage is essential for the development of societies and helps to build resilient communities. It allows for identity building, reconciliation, creativity, innovation, and many other activities that make societies stronger, richer and more peaceful. The need to connect with the past is deeply rooted within people, and it is therefore essential that memory institutions and governments have policies in place to ensure the long-term survival and accessibility of cultural heritage.

In recent years, the importance of cultural heritage has been addressed through several high-level policy documents. For example, the United Nations 2030 Agenda for Sustainable Development² underlines the importance of safeguarding cultural heritage. Under Goal 11 (“Make cities and human settlements inclusive, safe, resilient and sustainable”), Target 11.4 reads: “Strengthen efforts to protect and safeguard the world’s cultural and natural heritage.”

This ties in closely with Target 16.10 of Goal 16 (“Promote peaceful and inclusive societies for sustainable development, provide access to justice for

all and build effective, accountable and inclusive institutions at all levels”), which states: “Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.”

Further to this, the Sendai Framework for Disaster Risk Reduction 2015-2030³ also stresses the importance of culture and states that:

It is urgent and critical to anticipate, plan for and reduce disaster risk in order to more effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems, and thus strengthen their resilience.

Lastly, the Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society⁴ stresses in paragraph 19:

We recognize that information and communications technologies are also increasingly a means to support the diversity of cultural expression and the fast growing cultural and creative industries, and we affirm that comprehensive, practical digital strategies are needed for the preservation of cultural heritage and access to recorded information in the digital environment in all its forms.

The digital heritage challenge

In order to enable people to preserve and access their cultural heritage, we need to work together to overcome obstacles, such as an antiquated copyright system, ever-changing digital technology, and the sheer mass of digital content available, among others.

Today, large amounts of the world’s newly created cultural heritage are only available digitally, and never “fixed” in a physical form. While digital

¹ The International Federation of Library Associations and Institutions (IFLA) is the leading international body representing the interests of library and information services and their users. IFLA is an independent, non-governmental, not-for-profit organisation with over 1300 members in nearly 140 countries. We work to improve access to information and cultural heritage resources for the global community in this rapidly changing digital and print environment. Our key initiatives include access to digital content, international leadership, outreach, cultural heritage, and multilingualism. In our professional programmes we build the capacity of our members, and set the professional agenda through development of guidelines, standards, publications and events around the world. IFLA’s status as the global organisation for library and information services ensures that our voice is represented through formal relations with the United Nations and other organisations.

² <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

³ www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

⁴ workspace.unpan.org/sites/Internet/Documents/UNPAN96078.pdf

technologies offer a means of giving unlimited access to culture today, access tomorrow is far from guaranteed.

With the move from an analogue object-based memory (documents, museum objects, film rolls, photographs, etc.) to a digital-based memory, librarians, archivists, governments and, increasingly, individuals are facing new challenges in ensuring that our collective cultural heritage will not be lost.

There are some clear technological and practical challenges to this work. First is the rapid acceleration in the creation of information. Various studies have pointed to the growing volume of information on the internet,⁵ including scholarly articles⁶ and user-generated content.⁷ For some, this poses a technical challenge in terms of ensuring that there is enough storage space, but also a more philosophical one in terms of what should be preserved.

A second challenge comes with the rapid evolution of digital technologies. For example, much attention was paid to the question of how to preserve Germaine Greer's personal archives, given that much of this was saved on floppy disks.⁸ As old software (including operating systems) and codes become obsolete, it may become impossible to access information. If these are not preserved, simply holding the materials on whichever storage device or technology they were saved on will not be enough.

In addition to the practical and technological challenges of preserving and making such "born-digital" heritage accessible to the public, there are also legal problems. Activities that are uncontroversial when it comes to physical cultural heritage, thanks to copyright exceptions that recognise the public interest of archiving and preservation, can be a source of uncertainty when it comes to digital heritage.

Digital legal deposit of e-books and similar materials is in its infancy, meaning that a lot of material risks never being preserved for the future.⁹ As for other resources, legislation has too often failed to

keep up or offer the necessary clarity. Where there is no exception to copyright, there is an obligation to seek and obtain the permission of the rights holder. The sheer volume of digital information being created risks making this an impossible task. Even where an exception allowing for preservation exists, this can still be rendered ineffective if circumventing technological protection measures is not allowed.

Extended collective licensing is promoted by some. This offers an apparent solution to the question of clearing the rights to use works where it is difficult or impossible to find the rights holder (including for mass-digitisation projects).¹⁰ However, there is not always a collecting society which is sufficiently representative of creators in the cultural sectors in question. Moreover, a large share of the materials held in library and archive collections were never intended to be commercialised. As such, while licensing, and extended collective licensing in particular, have a place, they cannot be a cure-all for those involved in preservation activities.¹¹

There can also be questions around the creation of digital copies of analogue works. There are instances of digitised versions of public domain works being treated as new works, triggering the creation of new rights. This represents a lost opportunity to make use of the potential of digital technologies to give access, with digitised work then either hidden or behind a paywall.¹²

Some countries do have laws that allow for digital preservation, either due to timely reforms or flexible application of existing principles. However, a lack of harmonisation between countries – on copyright duration, the extent of exceptions or the use of licensing – makes it difficult to carry out transnational preservation projects. In a sector where effective cooperation can ensure better use of resources (both technical and financial), barriers to this can lead to waste.

5 Cisco. (2016). *The Zetabyte Era – Trends and Analyses*. www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni-hyperconnectivity-wp.html

6 Van Noorden, R. (2014, 7 May). Global Scientific Output Doubles Every Nine Years. *Nature.com*. blogs.nature.com/news/2014/05/global-scientific-output-doubles-every-nine-years.html

7 Gunelius, S. (2014, 12 July). The Data Explosion in 2014 Minute by Minute. *ACI*. <https://aci.info/2014/07/12/the-data-explosion-in-2014-minute-by-minute-infographic>

8 Stanton, K. (2016, 5 August). Germaine Greer's archive: digging up digital treasure from the floppy disks. *The Guardian*. <https://www.theguardian.com/books/2016/aug/05/germaine-greer-archive-digital-treasure-floppy-disks>

9 See examples from the British Library (www.bl.uk/aboutus/legaldeposit/websites) and ongoing consultations in the United States (www.copyright.gov/mandatory).

10 At least in the absence of an unremunerated exception, that is, one where a library or user can carry out preservation or other projects without having to pay compensation to the rights holder.

11 Keller, P. (2016, 26 September). A better solution to making out-of-commerce works available online. *Europeana Pro*. pro.europeana.eu/blogpost/a-better-solution-to-making-out-of-commerce-works-available-online

12 For a recent example, see the experience of the Milwaukee Sentinel: Takach, M. (2016, 19 August). Journal Sentinel Archive Disappears. *Urban Milwaukee*. urbanmilwaukee.com/2016/08/19/journal-sentinel-archive-disappears; Grabar, H. (2016, 24 August). Why Milwaukee's Online Newspaper Archive Vanished Overnight. *Slate*. www.slate.com/blogs/future_tense/2016/08/24/milwaukee_journal_sentinel_archive_vanishes_from_google_s_news_archive.html; Masnick, M. (2016, 26 August). Newspaper Archive Disappears From Google, Because Company Wants To Cash In. *Techdirt*. www.techdirt.com/articles/20160825/10114535344/newspaper-archive-disappears-google-because-company-wants-to-cash.shtml

Combating digital amnesia and remembering our digital heritage: A multistakeholder responsibility

Despite the uncertain terrain, many initiatives have started in recent years to address the need to combat digital amnesia and to preserve our digital cultural heritage for the future. Yet this is a task that cultural heritage institutions cannot address alone. Industry and governments will also need to be actively involved in ensuring that our digital cultural memory will be accessible for future generations.

One example of a cooperative approach is the UNESCO PERSIST project¹³ founded in 2013 by UNESCO, the International Federation of Library Associations and Institutions (IFLA) and the International Council on Archives (ICA). The project bases its mandate on the UNESCO/UBC Vancouver Declaration of 2012,¹⁴ which states:

Taking current and emerging challenges into consideration, the participants urge the UNESCO secretariat to: (...)

f. support the belief that good management of trustworthy digital information is fundamental to sustainable development by developing and implementing a global digital roadmap under the auspices of the Memory of the World Programme to encourage all relevant stakeholders, in particular governments and the industry, to invest in trustworthy digital infrastructure and digital preservation.

Over the last three years the UNESCO PERSIST project has started to address many of the challenges encountered by institutions when dealing with the long-term preservation of digital heritage. In order to approach these challenges, three working groups were formed to look at content and best practice, policy, and technology. The working groups aim to include members from all three main stakeholder groups of PERSIST: heritage institutions, the industry and governments.

The first major outcome of the project was the publication of the UNESCO PERSIST Guidelines for the selection of digital heritage for long-term preservation¹⁵ written by the content and best-practice

working group. The guidelines provide a starting point for libraries, archives and museums when developing digital heritage selection policies and give guidance on aspects which should be considered. IFLA saw the importance and need for these general guidelines to help the profession in addressing the problem of selecting relevant materials from the vast amount of digital data available and chaired the process of creating the Guidelines. Ultimately, they were written by experts from the library, archive and museum field, and are now under the ownership of the UNESCO Memory of the World Programme.¹⁶ The Guidelines also support the implementation of the new Recommendations concerning the preservation of, and access to, documentary heritage including in digital form (approved by the UNESCO General Conference in November 2015).¹⁷ These new recommendations support the mandate of the UNESCO Memory of the World Programme and stress throughout the importance of digital heritage and its preservation:

Preamble: Taking into account the rapid evolution of technology, and the challenge of establishing models and processes for preserving digital heritage objects including complex ones, such as multi-media works, interactive hypermedia, online dialogues and dynamic data objects from complex systems, mobile content and future emerging formats,

4.1 Member States are urged to consider their documentary heritage as an invaluable asset and to apply this perspective in national legislation, development policies and agendas. They are further encouraged to recognize the long-term need for new investment in the preservation of different types of originals in analogue format, in digital infrastructure and skills, and to adequately endow memory institutions.

The Guidelines are a first and significant policy step towards addressing issues, such as the value of digital content, and digital heritage and its long-term preservation.

The policy working group looks at further policy needs in order to communicate to governments the importance of national digital preservation strategies to support their heritage institutions. If we do not act now to preserve our digital heritage

¹³ UNESCO PERSIST website: <https://unescopersist.com> and for a general introduction: Buckley, R. (2016, 20 May). UNESCO PERSIST: A Global Exchange on Digital Preservation. *The Signal*. blogs.loc.gov/thesignal/2016/05/unesco-persist-a-global-exchange-on-digital-preservation/?locl=blogsig

¹⁴ UNESCO/UBC Vancouver Declaration. www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/mow/unesco_abc_vancouver_declaration_en.pdf

¹⁵ www.ifla.org/node/10315?og=7607

¹⁶ www.unesco.org/new/en/communication-and-information/flagship-project-activities/memory-of-the-world/homepage

¹⁷ Resolutions from the UNESCO General Conference, November 2015 (Annex V includes the Recommendations): unesdoc.unesco.org/images/0024/002433/243325e.pdf

and communicate the urgency of this to policy makers, we leave behind us a digital black hole.¹⁸ To combat this, the policy working group is currently investigating existing national digital preservation strategies and will analyse these to identify common aspects. The engagement of governments in the process of digital preservation is crucial in order to secure official support and understanding for the importance of the activity. UNESCO PERSIST aims to create further policies which will help UNESCO and cultural heritage institutions to communicate the urgency of digital preservation to governments and member states.

The software industry is closely involved in the project's technology working group.¹⁹ The major aim of the group is to create a platform²⁰ which makes outdated software accessible to institutions in order for them to preserve their content for the future.

IFLA works closely with UNESCO and other digital preservation initiatives such as the International Council of Museums (ICOM),²¹ International Council on Monuments and Sites (ICOMOS)²² and International Council on Archives (ICA)²³ in order to ensure that the library voice is heard and recognised as an important partner in the preservation of digital cultural heritage. To support this work further, IFLA has created an IFLA Preservation and Conservation (PAC) Centre²⁴ for digital preservation and digital sustainability at the National Library of Poland which will become operational in late 2016.

High-level initiatives, as outlined above, and exceptional work done at institutional levels²⁵ are a starting point for raising more awareness of the urgency of digital preservation. This is a matter which concerns everyone and we are at the beginning of a long journey to ensure that our digital cultural

heritage will be accessible in the future. If cultural heritage institutions, governments, the technology industry, individuals and all related stakeholders do not act now, we will lose our digital cultural heritage and our times will be a new dark age in history.

Am I allowed to preserve this? Responding to the challenges posed by copyright

Libraries, archives and museums have sought, in discussions at the national, regional and global level, to make the case for a copyright system that favours the digitisation of analogue works, and the preservation of “born-digital”²⁶ ones. With resources often scarce, it is important for these institutions to be able to dedicate as much of their effort as possible to preserving digital works, without causing prejudice to rights holders.

As highlighted above, in some countries copyright laws are already well suited to the digital preservation of non-digital works. The “fair use” doctrine²⁷ in the United States arguably offers enough flexibility to allow libraries, archives and other cultural heritage institutions to use digital techniques to preserve “traditional” works. Europe is currently discussing laws that should make it clear that people involved in preservation activities should be able to use any appropriate tools.

With regard to born-digital works, there are still many questions. While national archives have started to take tentative steps to record certain websites in some countries, independent (US) projects such as the Internet Archive Wayback Machine²⁸ have taken it upon themselves to record a much larger share of the internet. Their activities imply a certain risk – at first they faced legal challenges for infringing copyright. Now, however, their value is recognised, not least as a source of evidence in court.²⁹ They have certainly benefitted from the flexibility offered by the US fair use doctrine to engage in public interest preservation of digital works.

At the global level, IFLA, as part of a coalition of actors in the cultural heritage sector, has been

18 See the IFLA Trend Report: trends.ifla.org/insights-document (August 2013) and Ras, M., & de Niet, M. (2013). *A Global Digital Roadmap*. https://www.unesco.nl/sites/default/files/uploads/Comm_Info/position_paper_-_digital_roadmap_meeting_the_hague.pdf

19 van Gorsel, M., Leenaars, M., Milic-Frayling, N., & Palm, J. (2014). *Evaluation and Strategies of Digital Preservation & UNESCO's Role in Facing the Technical Challenges*. https://www.unesco.nl/sites/default/files/uploads/Comm_Info/20141011_evaluation_and_strategies_of_digital_preservation_unescos_role_in_facing_the_technical_challenges.pdf

20 PERSIST Technology Working Group. (2015). UNESCO PERSIST Heritage Software Platform. <https://unescopersist.files.wordpress.com/2016/05/unesco-persist-heritage-software-platform.pdf>

21 icom.museum

22 www.icomos.org

23 www.ica.org

24 www.ifla.org/node/1244

25 For example, by the British Library. See: Meikle, J. (2013, 5 April). British Library adds billions of webpages and tweets to archive. *The Guardian*. <https://www.theguardian.com/technology/2013/apr/05/british-library-archive-webpages-tweets>

26 Works which were first produced in digital format.

27 The fair use doctrine entered legislation through the 1976 US Copyright Act, and in the words of the US Copyright Office, “promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances.” By taking a more flexible, principles-based approach to what is “fair”, rather than by setting down rules for specific activities, it arguably offers greater possibilities for responding to technological change. For more information, see: www.copyright.gov/fair-use/more-info.html

28 <https://archive.org/web>

29 Cushing, T. (2016, 18 May). Federal Judge Says Internet Archive's Wayback Machine A Perfectly Legitimate Source Of Evidence. *Techedirt*. <https://www.techdirt.com/articles/20160518/08175934474/federal-judge-says-internet-archives-wayback-machine-perfectly-legitimate-source-evidence.shtml>

working to achieve progress at the World Intellectual Property Organization (WIPO).³⁰ This should both accelerate national reforms within member states, and set out minimum standards for each country which then permit and facilitate cross-border collaboration. Within a complete set of exceptions designed to cover all significant library activities,³¹ IFLA has called for a clear preservation exception and steps to facilitate working with out-of-commerce works (those which are no longer for sale through normal channels) and, as a subset of these, orphan works (those where the rights holder is either unknown or uncontactable).

Ensuring engagement: Access to digital culture

Even when the path to preserving digital heritage is clear, there remains the question of access. The high-level UN documents cited in the introduction stress the importance of ensuring that communities and individuals have access to cultural heritage in order to build strong knowledge societies.

IFLA works closely with UN institutions such as UNESCO and our other international, national, regional and local partners to guarantee that the objectives outlined in the high-level documentation are addressed in national-level implementation plans. For this we created a toolkit³² to help libraries advocate to their local governments on the importance of libraries in building informed and resilient societies and realising the UN 2030 Agenda. We also provided a booklet³³ which highlights the many ways libraries are already contributing to the many actions outlined in the UN 2030 Agenda.

Libraries, crucially, provide public access³⁴ to information and communications technologies (ICTs) which enable people to access the vast amount of information found online. IFLA supports libraries

so that they can offer these services and educate people on how to use ICTs and information found online. For this, people need multiple literacy skills (including media and information literacy)³⁵ which enable not only personal development but also access to and understanding of digital and analogue cultural heritage. Literacy is an essential catalyst for development and participation of everyone in society. The UN 2030 Agenda mentions the need for universal literacy in its preamble, which underlines clearly the need to not only preserve and give access to cultural heritage but also to ensure that people have the skills to use this preserved heritage.

Conclusion

In order to preserve our digital heritage for current and future generations, action is needed now from all actors – from policy makers, to practitioners, to content and technology creators.

On the copyright front, lawmakers must provide the space necessary for effective digital preservation. Given the spread of analogue heritage across borders and the merits of collaborative projects, as well as the global nature of the internet, action at an international level is an indispensable complement to work in national capitals.

Librarians and policy makers need to actively engage with each other on national levels to ensure that libraries and the crucial role they play in preserving our future are reflected in national development plans, in digital strategies and in the long-term outlook of a nation.

The UN 2030 Agenda gives us all a perfect framework to overcome these obstacles and work together for our future and for the future of the next generations. Digital preservation and taking care of our digital heritage is a matter which concerns everyone.

30 IFLA work on copyright exceptions and limitations for libraries at WIPO: www.ifla.org/copyright-tlib

31 Ibid.

32 www.ifla.org/publications/node/10156

33 www.ifla.org/node/10545?og=7409

34 Dynamic Coalition on Public Access in Libraries. (2015). Principles on Public Access in Libraries. www.ifla.org/publications/node/10328

35 IFLA. (2011). Media and Information Literacy Recommendations. www.ifla.org/publications/ifla-media-and-information-literacy-recommendations?og=81