Shaping a national consortium for digital preservation

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ABSTRACT

This paper asks the question "what form of digital preservation collective is best for Scotland?" and then sets out the options being explored under the leadership of the National Library of Scotland (NLS). As a result this paper straddles several areas across the themes of the conference. It deals with the desire for the creation of an integrated national preservation **infrastructure** in Scotland. It also looks at the ways we can develop an appetite for collaboration to align differing institutional contexts for preservation to build a better **community**. Additionally it examines issues around working within the **strategic environment** to coordinate local, regional and national approaches across Scotland and the United Kingdom.

General Terms

Infrastructure, communities, strategic environment.

Keywords

Scotland, National Library of Scotland, digital preservation coalition building.

1. INTRODUCTION

I present this paper, not as a technical expert in digital preservation, but as an industry leader looking to develop a rational national response to the practical application of digital preservation across the entire cultural heritage sector of my country.

At the same time I am motivated by more than a vague interest in the field of digital preservation. I am a Board Member of the Digital Preservation Coalition in the UK; I am responsible for delivering the entire digital strategy of the National Library of Scotland and I am one of the handful of people the Scottish Government comes to when it wants advice on the future of digital preservation in my country. I also have a background in developing shared services and I have first-hand experience of how difficult it can be to turn the desire for collective action into a reality.

2. WHAT SORT OF CONSORTIUM IS APPROPRIATE FOR SCOTLAND?

The national structure of digital preservation is currently being debated in Scotland by the cultural institutions themselves, by the Scottish Government and within the digital preservation community. The philosophical battle as to whether Scotland's cultural institutions should engage in digital preservation has been won. There is clear consensus that the answer should be "yes", but the institutions are at a cross-road about the "how". Without the right vision and leadership the outcome of this consensus is likely to be a messy series of independent initiatives. This paper looks at the choices open to the cultural sector in Scotland and ponders which options for joining things up might be politically and practically feasible.

Scotland has a complex cultural heritage landscape. Digital preservation could simply be seen as an internal issue for individual organisations. However, this flies in the face of Scottish Government policies to develop shared services and to achieve economies of scale. If we collectively opt for a fragmented preservation sector, it will make achieving the goal of unified search across collections much harder. Users benefit hugely if they can delve into many collections in a single search. The principal of unified search is also aligned with the desire of the Scottish Government to make access to services both digital and easy, a policy of digital first.

Digital preservation should be driven by aligning information management practices with business needs. This means having the right tools and workflows for preserving content, including accommodating any requirenst for continuing access. Up until now in Scotland the focus within each individual organisation has been inward-looking, concentrating on ones own data. This has led to a mixture of incomplete and technically incompatible solutions across the sector.

A digital preservation consortium for Scotland could be arranged around one or more different industry groupings or dimensions.

I am one of the leaders of the National Library of Scotland. This naturally suggests that from my perspective the consortium could be library centric. However, logically it could also be specific to the cultural sector, or it could be widened to include government data. Perhaps it should not be restricted to one country or one industry. Within each of these high level groupings there are further choices.

For practical reasons the number of options which could be efficiently explored were restricted to a few dimensions. I will now look at our main options.

3. LIBRARY DIMENSIONS

For a library centric approach, the model could envisage partnerships with university libraries, with public libraries, or with commercial libraries. In each case the scale could be city-based, or it could be spread across some or all of Scotland. Geographicaly it could also include other parts of the UK or even extend internationally. The reality is that the National Library of Scotland already participates in collaborative groupings within the library world at each of these scales for many different library purposes. However, with one very specific exception, it does not currently do so for digital preservation.

The exception is the shared Digital Library System (DLS) created to handle electronic Legal Deposit in the UK and Ireland. This common infrastructure is owned equally by the British Library, the National Libraries of Scotland and Wales, the Bodleian Library at the University of Oxford, Cambridge University Library and Trinity College Dublin.

The DLS is fairly new, only entering operation in April 2013. It includes all non-print publications and an annual copy of the .uk web, but excludes websites that are mostly made up of moving images and sound. Over 1 billion URLs have already been collected as well as more than 300,000 journal articles and many other e-resources. As is the case for print legal deposit, UK legislation dictates that electronic legal deposit can only be accessed on the premises of a legal deposit library. The DLS is managed from the British Library and features a full digital preservation environment with all content mirrored across four sites. To ensure the integrity and safety of the legal deposit holdings, it effectively operates as a walled garden. At present the work flows are integrated with the British Library's own systems. These flows are quite different to those of the National Library of Scotland, so they are not likely to offer Scotland a preservation development path for its other collections.

4. UNIVERSITY DIMENSIONS

Scottish universities and their libraries make an interesting potential pairing for several reasons. The nation has two research institutes of international stature working in the field of digital preservation. They are the Humanities Advanced Technology and Information Institute (HATII) at the University of Glasgow and the Digital Curation Centre (DCC) at the University of Edinburgh. Through these bodies, as well as through the Digital Preservation Coalition which is partly co-located at HATII, Scotland is plugged into a wide variety of national and international research preservation initiatives, all of which must benefit the National Library of Scotland and other players in Scotland.

Most Scottish universities are well advanced on the path to hosting research data repositories and at least some repositories offer an effective preservation environment. The current strategy of NLS is to leave the management of research data repositories to the universities, but there would seem to be huge long-term potential for new types of research if NLS readers could seamlessly access all of the university's research data from within the library environment.

NLS and the University of Edinburgh library currently share the same library management system sitting on the same servers at the University of Edinburgh. This was procured through the Scottish Digital Library Consortium, a member-owned co-operative. The

SDLC could be a potential conduit to explore for further discussions.

However, new dimensions have recently been added to this equation. The Librarian at the University of Edinburgh, Dr John Scally, has just been appointed as our National Librarian. At the same time the University of Edinburgh has decided to migrate to a new libray management system. Helpfully, they have made the tender process consortium-friendly, so the opportunity for NLS to follow them by joining the new system is very open. We are still working through the implications of these developments.

5. NATIONAL COLLECTION DIMENSIONS

The various National Collections of Scotland provide another obvious option for building a consortium, as all of the key players are wholly or mostly financed by the Scottish Government and each body has a need for digital preservation. However, each organisation is at a very different point in the journey to create a preservation environment, giving their staff very divergent opinions of what we should do. On the plus side, three bodies are individually pushing the digital preservation agenda, though each in a different way. They are NLS, the National Records of Scotland (NRS) and the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). The activities of the National Library of Scotland are detailed in other parts of this paper and will not be dealt with here.

The National Records of Scotland have quite advanced plans for building a Trusted Digital Repository. Laura Mitchell, the Deputy Keeper of the Records, recently took on the role of Chair of the Digital Preservation Coalition, offering NLS a huge opportunity for closer and more effective collaboration. We are also in talks about possible storage initiatives for physical collections.

At the Royal Commission on the Ancient and Historical Monuments of Scotland there has been sustained lobbying of government to fund the purchase of a commercial Trusted Digital Repository solution different to that of any other Scottish body. RCAHMS holds the national collections of archaeological and architectural material, as well as the second largest aerial photographic archive in the world. While awaiting a decision on the TDR, the Royal Commission has entered into a data storage agreement with the National Library of Scotland which transfers some of the preservation risks to the Library. Again there is real potential for collaborative work.

6. DMENSIONS ARISING FROM PHYSICAL INFRASTRUCTURE AND COLLABORATIVE ARRANGEMENTS

Two other factors potentially influencing the form of a future digital preservation collaborative are the existing physical infrastructure and collaborative arrangements within the sector. They manifest in three different ways.

Firstly, since 2010 the National Library of Scotland and the National Galleries of Scotland have been building a shared service for their Information Systems. As a result they now share their networks and could share their preservation environments. The politics of the shared venture have not been completely smooth and the first attempt of the National Library of Scotland to provide the Galleries with a Digital Asset Management System

was rebuffed and a commercial product was procured by the Galleries. This commercial system has now been orphaned because its project funding ended, and a further merger opportunity is expected to develop soon. We are now also co-operating on a major training initiative for entry-level digitisation staff.

A second opportunity comes from the fortuitous geographical proximity of potential partners. Legislation is currently before Parliament to merge RCAHMS with Historic Scotland to create Historic Environment Scotland. Individually and together these bodies have the potential to join the NLS optical fibre network at low cost due to the close proximity of their buildings to NLS lines. The NLS optical fibre link also goes directly past the National Museum of Scotland, offering a cheap and easy connection opportunity.

Some of the other national collections are less engaged, but remain potential partners. They include the the Royal Botanic Gardens Edinburgh and the National Trust for Scotland. Their networks in Edinburgh are close enough to the National Library to make the use of commercial suppliers an efficient and economical option.

Thirdly, the National Library of Scotland has aspirations to build its own data centre, with the ultimate aim of providing the data storage and digital preservation solution to all of Scotland's national collections. This could provide a motivation for true collaboration. It is certainly an opportunity favoured by the Scottish Government. It delivers joined-up working and has the potential to be funded from sources outside the cultural portfolio as a part of building the national digital infrastructure.

7. ARCHIVAL DIMENSIONS

A similar but different grouping comes from teasing out the issues on a sector-by-sector basis. The National Library of Scotland is first and foremost a library, but it is also the second largest archive in the country, holding about 8 million archival items. In addition, NLS is currently establishing Sound Scotland, the national sound archive, and it already operates the Scottish Screen Archive as a semi-autonomous arm. This suggests that partnering with archives would be a strong option.

Sound Scotland is an interesting test case. After a nation-wide consultation in 2009, the National Library of Scotland has agreed to build a metadata repository which will provide a single central point on the web to help locate all sound archive resources in Scotland. This allows the existing sound archive structure of Scotland to remain intact, avoiding claims of any takeover of other people's assets by the National Library.

In addition, NLS is also creating a public upload facility which will ultimately demand its own digital preservation environment. The roll-out of Sound Scotland will be supported by a significant training effort to assist the people in sound archives to run their archives better and to improve their standards of preservation, both analogue and digital.

8. PRIVATE SECTOR DIMENSIONS

Some material from the National Library of Scotland and the other Scottish cultural collections has been digitised by collaborations with commercial partners such as Gale Cengage for Eighteenth Century Collections Online and ProQuest's Early English Books Online. Similarly D. C. Thomson now holds massive collections of content for the British Newspaper Archive and for genealogy material that appears in ancestary.com. In each of these cases we are relying on the preservation solutions of the commercial partner for the working copy, though the originating institution should also have the material secured in their own facility. I don't see this as an area which really offers any sort of a meaningful all-encompassing option for Scotland. It is too limited in scope. However, it does see some of our content being preserved, and that is a good thing.

9. CONCLUSIONS

Scotland is on a journey which I hope will see a viable digital preservation coalition coalesce around one or more of the dimensions discussed. Each dimension reported here has been the subject of various exploratory discussions over the past three years. Recent efforts have seen these issues being escalated from officer-level to chief executive level.

On some dimensions the funding agencies have also started to take an interest in supporting the creation of collective digital preservation solutions. This has been an evolutionary process. Over the past decade funders have done this for the storage of physical collections. As a result in Scotland it is much easier to fund collaborative building projects than it is to finance stand-alone stores. We are working to create parallel developments in the digital arena.

The National Library of Scotland's experience in building shared services with the National Galleries of Scotland, as well as its efforts to encourage the collective national procurement of a single Library Management System for NLS with the university sector, both suggest that progress will not be particularly quick, but it is a goal worth pushing for.