The 'DOD' and 'POD' project in context at McGill: part of digitizing collections to preserve content, provide access and enrich research

The McGill Library in Canada has extensive holdings of online resources, including its own theses and purchased e-book and e-journal collections. It also holds significant collections of rare books and heritage materials in its central Rare Books and Special Collections and branch libraries, amassed over many years through significant donations as well as purchase. Material covers many languages and multiple formats, and ranges from Canadiana to cook books. Most items held are not listed in the online catalogue, making discovery difficult. Early digitization focused on scanning of content and creation of individual websites for projects. More recently, planned standardized approaches have focused on the publishing of two online journals, on a digitization-on-demand (DOD) project with materials in the public domain, linked to print on demand (POD), and on improving discoverability. This paper tracks some developments, outlines current projects and indicates future directions.

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Background

McGill University, one of Canada's leading research universities, has two campuses, 11 faculties, 300 programmes of study and over 33,000 students, with students from 160 countries around the world. Its largest campus is located in downtown Montreal in the province of Quebec[1]. The McGill Library[2] provides the comprehensive information infrastructure necessary to sustain leading-edge teaching, learning and research activity at McGill University. It holds more than 6 million items in its various collections, which are located in 13 branch libraries. Its rich collections, comprehensive information resources, innovative services and attractive, comfortable facilities attract over 3.6 million physical visits annually and millions more visits online. The Library has emphasized the development of its digital collections and holds over 60,000 e-journals, with

over 40,000 unique titles, of which 10,000 commence with the first volume issued, and two million e-books. Through its eScholarship@McGill programme, access is provided to a growing e-print collection and over 8,000 digital theses held by McGill, with all theses now being submitted online. The University is primarily funded from government provincial sources. Fees in Quebec are the lowest in North America and funding for both the Library and the University is supplemented by donations and income from its endowment.

Early approaches

The term digitization is variously used and digital libraries have often been seen as different from

print libraries. McGill Library prefers not to use the term 'digital library' and views its collections, both print and online, as forming a composite whole. The Library was an early participant in the purchase of digital content, obtaining CD-ROM databases, multimedia, and licensed access to content through the purchase of e-journals, e-books and geospatial, numeric and social data sets, participating in collaborative arrangements at the national and provincial level, primarily through the Canadian Research Knowledge Network (CRKN)[3] and also through CREPUQ (Conférence des recteurs et des principaux des universités du Québec) Sous-comité des bibliothèques[4]. The Library also provided access to 'born-digital' content, and was an early adopter of the creation of digital objects from its own collections. Involvement in both digitization and purchase of online resources was facilitated by the availability of private donor funds from a key donor, Richard Tomlinson[5].

The Library began its Digital Collections Programme in 1996 and in the next ten years undertook a variety of projects. Projects included the creation of digital versions of images, manuscripts and books held by the Library through scanning, the creation of online exhibitions and related web pages, and participation in projects associated with cultural heritage (le patrimoine) at both federal and provincial levels. While no formal selection criteria were used, in general, the projects focused on providing greater access to items in high demand, improving the visibility of analog collections, many of which were not listed in the library catalogue at the item level, the preservation of fragile items to prevent the deterioration of the original and the support of research activities. Among 50 projects undertaken were web-based exhibitions containing digitized objects (including images, photographs, monograph pages and sound recordings), two digitized journals, some reports, archival inventories and bibliographic databases, as well as born-digital content (including e-exams, e-prints and e-theses). Topics ranged from Napoleon to architectural images[6]. A few digitized items were offered for sale via the Library website, notably Canadian war posters and historical maps.

A digital scanning service was also provided. Typically for digitization projects at this time, there was little consistency, limited or no metadata and a lack of standardization. Projects were largely self-

contained with their own search interfaces and some with their own search engines. No overall standards or selection policies were developed or applied. Most of the work was undertaken by students and while some full-time library staff developed expertise, there was not a consistent approach to developing and retaining expert knowledge. The projects were experimental and innovative but it was time in 2006 to take stock to determine future directions. A commissioned report identified future directions for digitization, recommending that activities be expanded and formalized, linked to formal collection development and selection policies, follow specified metadata and description standards, be integrated into the Library's web interface and that the programme be relocated organizationally within the Library Technology Service.

The Library implemented the Ex Libris digital asset management software Digitool[7] for use with its e-print and e-thesis projects and resolved to use it for organizing the documents and associated metadata for some of its in-house digitally created collections.

A further commissioned report was produced in 2008 to develop strategic directions for digitization activities. This report recommended that the legacy collections be made accessible through the Library's catalogue, that e-publishing of e-journals be undertaken through Synergies[8] or Erudit[9], that new software be investigated for use with the digital collections, and that the Library involve itself more extensively with other collaborative activities being undertaken both in the province of Quebec and in Canada generally, as well as at an international level. The producer of the report, Alan Burk, also assisted the Library with the development of a standard metadata schema, a model template, and assisted in the preparation of applications for research grants for digitization activities

Fresh focus

The McGill Library recognized the need to develop its own internal expertise in digitization, to follow standard approaches, to link its activities to the Library's strategic plan and the University's research aspirations, and to set achievable limited goals in the short term. Both reports had focused on process and technology rather than content and

discoverability. Further digitization activities required a targeted client focus on widely known real needs, rather than reflecting the narrow interests of a few. A simple goal was formulated: To extend the availability of the McGill Library's uniquely held special collections, focusing on client needs, in support of the Library's strategic plan and the University's strategic goals and directions.

How to achieve the goal

New principles were embraced whereby digitization became an integral part of the Library's services and activities and not a separate programme. Seamless integration into the Library website meant all digitized items would be discoverable and deliverable via the Library catalogue. Furthermore, all items digitized would be in open access, with digitization restricted to items indisputably in the public domain unless written permission from the copyright owner had been separately acquired. Collection experts would determine the priorities for digitization guided by a general framework which included anticipated demand and extent of use, uniqueness of the item, and its capacity to support priority teaching research and learning needs of the University. Additional library staff would be devoted to digitization, and expertise would be developed in house under the management of the Library Technology Service, with Collection Services staff (the area of the Library responsible for acquisitions, cataloguing and collection management) involved in the oversight of metadata and taxonomy development. Website content would be revisited and legacy projects dealt with as deemed necessary. Liaison librarians working with faculties and departments would be involved in selection of material to be digitized and would also provide guidance in treatment and display. Pricing for purchase of digitized copies would be reviewed with a view to cost recovery, and Library finance staff would be involved in business processes. The Library's role was further clarified in the Library's strategic plan.

Current activities

In 2008, the Library was approached by both the Faculty of Arts and the Faculty of Education to assist in e-journal publishing projects. As a result, discussions were held with Érudit at the Université

de Montreal, and the Library has become the publisher of two e-journals. *Cuizine*[10], the journal of Canadian food culture, a scholarly peer-reviewed fully indexed digital journal with image and sound, which is available through open access, was launched in an up-market butcher's shop in Toronto and no less tastefully at the McGill Institute for the Study of Canada in Montreal. The journal now has two issues available, and has been an excellent collaborative venture. The second journal with which the Library has become associated is the *McGill Journal of Education*[11]. The Library is currently investigating the production of student journals, of which there are several published at McGill. McGill targets teaching informed by research and regards student writing of articles as an important activity. The Library is keen to support this.

The Library has also participated in the submission of research proposals from the Faculty of Arts involving digitization, with varying degrees of success. Digital humanities is a priority. A bid to establish a second TAPoR[12] project, with McGill's inclusion, was not funded, but efforts are being made to ensure some further involvement. Other funding applications involving the digitization of images have been successful and the Library is directing efforts towards these. A successful project in digitization of photographs in our Osler Library of the History of Medicine will be used as a template for some of this work. Virtual versions of real exhibitions such as the 'Champlain Revisited' exhibition mounted in celebration of the 400th anniversary of the founding of Quebec City[13] are gradually being made available at the same time as real exhibitions. One-off projects are being avoided.

The 'DOD' and 'POD' project

The most significant ongoing activity is in the digitization-on-demand (DOD) and print-on-demand (POD) project. There have been many significant recent developments which have led to the emphasis on this area. The development of high-speed non-destructive mass book digitization equipment and the capacity to digitize library collections using improved robotic scanners, combined with decreasing costs of the equipment and of storage, have been significant factors. Also of significance are the enhanced possibilities for item description, access and retrieval which have recently emerged and will continue to develop via the semantic web, and the improved discoverability

via metadata harvesting by Google Scholar (including holdings in worldcat.org). There is also an increased appetite for Canadian heritage materials and a growing body of interest in online scholarship, particularly in the humanities. The Library actively contributed to Canadian heritage by uploading metadata linking to almost 6,000 digitized items for the Alouette project, now known as the Canadiana Discovery Portal[14]. The ability to download online content to mobile devices such as e-book devices marketed by companies like Sony, as well as iPhones and PDAs, has also encouraged digitization activities. The nature of publishing itself has changed significantly and low-cost, high-quality printing and binding capacity and the ability to market and promote availability of materials online are all encouraging the development of such initiatives.

The Google book project has demonstrated that there is enormous interest in digitization of library book collections. Not all have wanted to go down the Google route – indeed not all have been able to do so. Some libraries, and McGill is one of them, see independent projects as valid and important ways of creating content in open access. Nonetheless, McGill Library is planning to collaborate with others and to build partnerships in its endeavours.

In 2008, the Library purchased a high-speed robotic scanner (the APT BookScan 2400RA) through a partnership with US-based Kirtas Technologies[15] and Canadian re-seller Ristech[16]. This purchase followed a visit to the British Library where the Kirtas robotic scanner was being used to digitize research collections. The project's aims relate to exposing the treasures of McGill Library to the world, to enabling sophisticated means of resource discovery and to supporting the educational and research goals of the University. The Library is undertaking digitization of targeted portions of its collections and also producing digital and print copies on demand. While the business plan is still being developed, several collections have been targeted in relation to both popularity and research potential. These include cook books. Titles created digitally thus far include: *How we cook in Canada* by Helen MacMurchy, *The modern cook: 1462 recipes by Queen Victoria's chef* by Charles Elme Francetelli and *Cakes, pastry and dessert dishes* by Janet McKenzie Hill.

The Library's collections are gradually emerging from the stacks to the web, with digitized copies of previously elusive materials being made available through the Library's online catalogue. Books can be ordered through major online retailers such as Amazon.com and Lulu.com[17]. Users want to have the option of downloading content to their personal computers, or to hand-held devices, to maximize access and use. The Library has purchased the Overdrive software[18] to ensure that its digital holdings can be accessed easily via mobile devices.

As well as targeting specific collections for digitization, the Library has also loaded records on to the Kirtas books website[19] and, as mentioned, is undertaking a DOD and POD project. This project is in its infancy and the site makes available material from other Kirtas partners like McMaster University and the University of Pennsylvania. Choosing from the metadata extracted from the library catalogue records and loaded on the website, clients may request digitization of items in the collection. The items come from the Rare Books and Special Collections and are out of copyright. To date, three requests have been received, for: *Photographic pleasures popularly portrayed with pen and pencil* by Cuthbert Bede, *Notes on noses* by Eden Warwick and *Promenade autour de l'Ile-aux-Coudres* by Alexis Mailloux.

A POD service has also been established at the McGill Library itself. For the price of a commercially published paperback, anyone can own copies of invaluable items ranging from the first edition of Charles Dickens *The Christmas Carol* through the cookbooks mentioned above. The Library is reaching out to its community to share the vast resources available. The Espresso Book Machine[20] has been purchased to facilitate this service. The POD service is also client-driven and clients can select out-of-copyright materials to be digitized for them.

A business plan is being created for the new DOD service. An initial version was submitted to a Business Plan competition, the Dobson Cup, organized by the Desautels Faculty of Management at McGill University, and won a Highly Commended award[21]. This plan is targeting the marketing activities to be introduced, the costings to be developed and the overall goals of the project.

Next steps

Much remains to be done. DOD and POD have begun at McGill. The Library is looking at working

more closely with other services on the campus, on developing its marketing and outreach activities, and refining its costings. The Google book project is one approach. Others are also possible and the ultimate goal is to share little-known resources with the world of scholarship and learning.

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