Online collaboration and knowledge dissemination for university collections

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Abstract
Universities and university museums are faced with numerous challenges regarding access to their collections for diverse user communities. In today's electronic age, a new model has emerged for granting online access to collections. This paper will present some challenges and successes of current solutions in use by Carleton University's Great Lakes Research Alliance for the Study Aboriginal Arts and Culture (GRASAC), the University of Pennsylvania Museum collaborative virtual exhibition Tipatshimuna and the McCord Museum, formerly administered by McGill University. The research and knowledge dissemination mandate of universities, together with the issues surrounding the repatriation of objects, online collaboration and access to collections, the digital form presents a real opportunity to benefits universities, researchers, students and the general public.

What is cybermuseology?
"Cybermuseology is an approach; it includes everything from a museum's qualities to its values and transposes it to a new medium – in short it is the accomplishment of the museum's mandate through a Web-based portal" (Éric Langlois, unpubl. data). Cybermuseology as a concept has been emerging since the mid-1990s. The pioneers of this discipline believed that the possibilities were endless; and they were right. Their belief that the museum website could be more than just a place to display information about the physical location (address, opening hours, etc) lead to the display of actual museum content online. The goal of cybermuseology was to make museum content accessible to the general public, but also to communicate to new specific targeted audiences (youth groups for example). The internet created a structure for innovation in the museum field supporting this goal. The web provides the means to democratize heritage just as Malreux envisioned photography. During the early stage of cybermuseology, museologists witnessed a mass digitization of collections stored in databases. Storage space online was far more obtainable and inexpensive than museum floor space, both to develop and maintain – making it possible for museums to virtually display far more material than they could in their physical locations. The results were rich virtual collections of raw materials that unfortunately meant little to the general public. To address this gap, museum educators, curators, and other interested parties began to work with these un-interpreted collections and create the first virtual exhibitions, online interactive educational activities and, eventually, entirely virtual museums. Cybermuseology became a field of study and expertise. Today, programs are taught throughout specialized universities in Canada such as l'Université du Québec en Outaouais (Gatineau).

Open source and Web 2.0
The internet's infrastructure has not changed much, however its content has definitely evolved. Today, there are enormous quantities of relevant interactive information for research, teaching, etc. Not only has the world generated new content but new concepts were created, new possibilities emerged, and reaching out to a larger public has never been easier. Open source is a concept that enables communities to build new communication and dissemination tools. These tools are accessible on the internet, and with little customization and (possibly more importantly) limited budget, museums can use them for their specific needs.

Web 2.0 simply means: a set of specialized tools designed to generate social interaction. Many of these tools (RSS, Tagging, etc.) have been created by the open source movement. The Open Source Initiative describes the free access to software's source code with the possibilities of redistribution and

customization. Social media, born from this initiative, started a cultural and knowledge revolution: it contributes to the construction of contemporary intangible heritage around the world. Museums, archives, libraries, universities (MALU) known as collection holders have paid a great deal of attention to this trend, though social media is in fact only the tip of the iceberg. MALU democratized world heritage in a new collaborative dimension. Malraux's vision of a museum without borders is a XXI century reality.

To help demonstrate the large scope of this new trend, this paper examines three case studies: Tipatshimuna, GRASAC and THEN/HiER. Some museums have already found Web 2.0 useful to expand research opportunities. In these cases, the user or "visitor" becomes an actor and interacts with the collection to further document it, rather than merely consume it. Museums should stay on the look out for new cost effective ways to improve practices. Technologies have proven time after time the benefits of being an early adopter.

Collaboration

The following sites are built on, and depend upon, continued collaboration. The technology itself is weak when it comes to content; it is provided by the community the tool is designed for. Users can add new content; others can update, comment on it, or add to it. The resource then becomes dynamic, and it evolves at a constant pace with the community's knowledge. Collaboration is a powerful means to drive knowledge further, faster. Distance and lack of resources have all too often limited the exchange of knowledge; technologies can be used to minimize these limitations. Previous information technologies have made things easier on a smaller scale – but the main advantage of these new platforms is that they get a lot of people involved relatively quickly. Some of the impact this can have on MALU's collections is obvious, but there are other benefits that are less immediate. Collaboration platforms have already shown themselves effective by making collections flourish by means of research, education and preservation as the following cases studies will demonstrate.
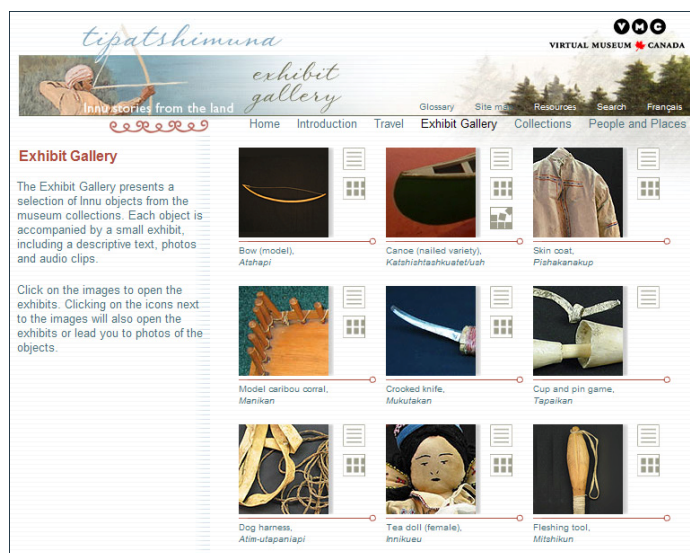

Fig. 1 - © Virtual Museum of Canada, www.tipatshimuna.ca

Tipashimuna

Tipatshimuna is a bilingual virtual exhibition that focuses on the heritage and traditions of the Innu people, using their own words, stories and material culture. It was realized between 2005 and 2006 with the help of the Virtual Museum of Canada's virtual exhibition investment program and partners such as the Rooms Museum (Newfound-land), the McCord Museum (Montreal), the Musée amérindien of Mashteuiatsh (Québec), the New Brunswick Museum, the Peenamin McKenzie School (Labrador) and the University of Pennsylvania Museum.

Tipatshimuna was recognized by the Canadian Museum Association for outstanding achievement in multimedia, and AVICOM (ICOM's international committee for the Audiovisual and new Image and Sound Technologies) for the Web'Art Gold Award.

This project was created in order to prevent a tragedy: the lose of a First Nation's cultural heritage. Concerns of losing this piece of history is a great fear in the Innu community, but also among most Canadians. This project took the spotlight because of its innovative solutions for the preservation of the Innu's oral traditions and intangible heritage, and for creating a means to prevent this tragedy.

This site was developed to not only provide a space for the Innu people to showcase their history to a world wide audience, but to give them the skills and tools necessary to maintain the site after it was developed. This was an exercise in virtual repatriation, allowing the Innu to regain control over artifacts that are stored in museums as well as preserve their intangible heritage, such as stories and memories. A gallery and search engine display a rich digital collection of objects that can be searched by keywords in English or Innu-aimun.

The entire project was run as an ongoing focus group. The web was chosen as the perfect medium to showcase Innu collections and stories because of its accessibility, but the internet was frightening to some of the elders; part of the project was to educate them on the benefits on using such a portal. CHIN, Idéeclic and The Rooms Museum met with the Innu Nation many times throughout the project's development, talking to elders, youth and other members of the community. The site was tested at several stages, to ensure ease of use, as well as respect for the Innu people and their cultural artifacts and heritage. Their insight was vital to the project's success. Sometimes, these focus groups were very large, encompassing many different members of the community.

Content was successfully added to the platform but it has not been as dynamic as it was hoped for. In order for the content to become a powerful resource, the community's youth would have to value the portal as their own and get more involved; the Innu people are the experts when it comes to their collections, stories and culture. Parties involved in the Tipatshimuna project hope that with time they start documenting their tradition with the help of this tool.

GRASAC

The GRASAC Knowledge Sharing Tool (GKS) is a wiki-style collaborative work environment that allows scholars in history, art and First Nations culture, along with several First Nations communities in Canada, to share information on Aboriginal a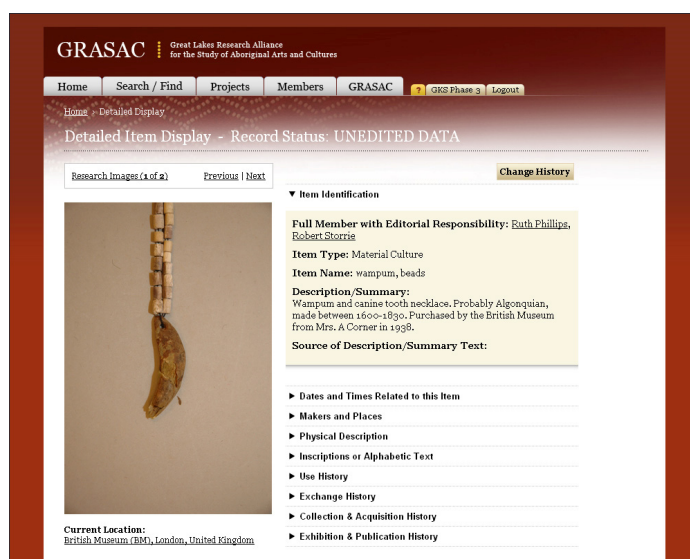rtefacts contained in collections in many different repositories across the globe (heavily concentrated in the UK, Canada and USA). Aboriginal artefacts sometimes end up in museum collections with little information or provenance to accompany them. Records may be spotty, incomplete or could even contain misinformation. The goal of the GRASAC tool is to provide high quality expertise and multi-disciplinary collaborative research to help fill the gaps in museum records, as well as to create a space for knowledge sharing between individuals studying in this field and those possessing traditional knowledge.

Fig. 2 - © GRASAC, grasac.org/gks/gks_about.php

To develop the GRASAC Knowledge Sharing Tool, various functionalities were created: multiple user access levels (administration, member, researcher, guest), login and user

verification system, a member directory, a collections management database including multiple types of data and the ability for users with certain access rights to add or edit records, add images, relate items to one another and leave comments.

Comments are linked to each user, and can be attached to text, images or other information within the system. Users can also make links between related artefacts, and specify why these artefacts should be linked; for example, two wampum belts in two museums are from the same treaty negotiation.

The GKS tool also contains powerful advanced search features, allowing users to search for open ended date ranges, keywords in various fields of the database, as well as by category and catalogue number.

Future developments include online collaborative workspaces, full administrative module, user-generated bibliography module, data harvesting system (to draw information directly from museum online databases), offline data-entry tool for research trips and additional comment tracking features.

Fig. 3 - © THEN/HiER, www.thenhier.ca

THEN/HiER

The History Education Network (THEN)/Histoire et Éducation en Réseau (HiER) is a collaborative network of diverse professionals in the fields of historical study, curriculum development and education in Canada. The goal of the network is to bring together people from across Canada to inform, carry out, critique, and implement research into the methods and implementation of historical education. THEN/HiER and Idéeclic worked together to develop a Drupal (an open source software) based collaborative website that allows them to engage partners in discussions (via forums and commenting features), critique curriculum documents, share ideas and develop collaborative projects.

The site allows members to:
- add content such as videos/podcasts or project descriptions;
- start forum discussions on research, policies, etc.;
- share their work with others from across the history education community.

The site also is a communication platform with a bulletin mailing feature, RSS feeds, polls and member messaging functionalities. Site contents can be accessed in the user's selected language (English or French), however communication between the two languages is facilitated by providing multilingual forums, and commenting in both languages on documents labelled "bilingual". Basically, when this type of document is created, even if it is translated, the comments provided on either language show up on both pages. French comments will show on the English document and vice versa.

Conclusion

The growing expertise in the field of cybermuseology allowed these platforms to be developed to increasingly better suit the needs of the university museum community. They are constantly being customized and new features added according to best practices in the fields of technology and museology. Tipatshimuna, GRASAC and THEN/HiER demonstrate the evolution of these practices in a short lapse of time. These projects have all contributed to today's knowledge concerning the many applications of Web 2.0 features. It has rendered collaborative and decentralized research possible, and accelerated the documentation of museum records across the world while contributing to fulfil the museum's mandates.

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