

**Digitization strategies for legacy resources in Africa:
incremental or collection-based approaches?
Experience from the University of Botswana**

Monica Morrison

Senior Librarian

Harry Oppenheimer Okavango Research Centre,
University of Botswana, Maun, Botswana
monicamorrison@hotmail.com

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Introduction

Digitization of library, archival and other legacy resources is frequently associated with the concept of collections. Materials collected by a single scholar or enthusiast are attractive candidates for capture in electronic form because they offer the promise of creating a resource that is much more than the sum of its parts, a resource that reflects and, to some extent, recreates the knowledge of the collector and the context in which he or she worked. The resulting product also has a certain aesthetic integrity that appeals to people: it tells a story, often a colourful or dramatic one, enriched by personal anecdote, documentation and images from the period.

Digitization projects that attempt to capture this rich combination of original materials and cultural context are, however, resource-intensive exercises that require a high level of focus, dedication and know-how as well a significant investment in technology. While it is not difficult to obtain funding for this type of project, mainly because the work can be expressed as a project with a finite lifespan, it is a challenge to embed the work in a cultural institution so that existing staff gain capacity without crippling current operations.

There is often also in this type of approach a political challenge that is common in the African context. Many such collections were created in the colonial period, or in a post colonial environment where collectors still came from the educated or leisure class. Focusing attention on these people and their codified work while the knowledge resources of a still predominately oral society go unsung, sometimes causes resentment and obscures the very real value of the content of the collections.

Al Kagan, reporting on the Africana Digitization Workshop held in 2007 (Kagan, 2007), repeated Premesh Lalu's warning that the knowledge base of colonial power can be used to rewrite history, and made the point that dominant political forces tend to control the process of framing and selection of materials for preservation and

dissemination. This echoes concerns that have been expressed since technologies started to become widely available for capturing legacy library and archival materials in digital form; see also Peter Limb (2005) and Britz and Lor (2004). All have urged local decision-making and control in development of digitization projects. Even in the local context, however, there are political forces at work (Schwartz and Cook, 2002) and librarians and archivists must develop strategies to ensure that selection of materials for enhanced accessibility reflects the needs and sensitivities of a community.

One alternative to digitizing entire collections as a project is the selective capture of resources, based on demand expressed by users and researchers. Justification is clear, as there is a direct and immediate need for the material, and the institutional effort involved is much less as it is spread over time and can be fitted into the ongoing work of the institution. Digital collections are thus built up incrementally, growing in what might be described as a more organic way in line with the interests of the research community. Additional funding for this approach is, however, more difficult to obtain as this is perceived to be part of the ongoing activities of the institution. The politics of working incrementally in this way may however be much less of a problem, as the focus is not on material with a specific provenance or cultural background, but almost always thematic.

The University of Botswana Library Services has been testing both approaches to digitization over the past three years. Based on demand for single documents, the Library Botswana Collection is being incrementally digitized and linked to the Library catalogue; at the same time, project-funded digitization of small whole collections is being carried out at the Harry Oppenheimer Okavango Research Centre of the University.

This paper uses the University experience with both approaches to look at the advantages and disadvantages of both and to analyse and discuss the implications of digitization in other African cultural institutions.

The Harry Oppenheimer Okavango Research Centre (HOORC) and its Role in the Okavango Community

The University of Botswana HOORC was established in Maun in northern Botswana in 1994 to advance scientific knowledge and promote sustainable natural resource management in the Okavango Delta and the Kalahari region. It is the principal research centre of its kind in Botswana and aspires to help conserve the Okavango and Kalahari ecosystems. The strong geographic focus of the Centre has led to development of Geographic Information Systems (GIS) capacity to support the multidisciplinary research of the Centre.

The village of Maun, recognized as the gateway for the high-end tourism industry of the Okavango Delta, is a socially partitioned environment with much of the lucrative tourism business owned and managed by expatriate white South Africans under

leases from the Botswana Government. Local Botswana citizens supply support for this industry in the form of guides, drivers, office staff, housekeepers and, occasionally, camp managers (Mbaiwa, 2005). The Botswana Government's development and promotion of the Okavango Delta Management Plan between 2003 and 2007 included a vigorous public consultation process that resulted in identification of an inclusive community which was a cross section of Delta "stakeholders" (Magole and the Okavango Delta Management Plan Project, 2007). This community has become a focal point for HOORC's outreach activities, the object of the Centre's efforts to explain and interpret the science being carried out on its campus.

The HOORC Library

The HOORC Library began with the donation of a private collection of books, journals, maps and other materials assembled over a 30-year period by a government officer, Pete Smith. Smith, a Rhodesian by birth, had worked for 30 years on tsetse fly and invasive weed control in the Okavango Delta and was a recognized source of knowledge in the Okavango community. Smith transferred his herbarium collection to HOORC shortly before his death in 1999, after which his family donated his books and records to HOORC. The University of Botswana Library Services built on this foundation by establishing staffing and acquisition funding for a branch library to serve the growing research centre. In 2009 the HOORC Library has a catalogued collection of close to 20,000 titles and has accessioned two other special collections from researchers who had lived and worked in the Maun area, anthropologist Hans Joachim Heinz and wildlife ecologist Richard Bell.

The HOORC Library is housed in two "portacabins" with space at a premium. In addition to serving the Centre's approximately 30 multidisciplinary academic staff who routinely work collaboratively with external researchers, the Library receives more than 1000 external visitors a year, many of whom are international researchers working on issues related to the Delta's environment. The Library also has a mandate from the Government of Botswana to collect, preserve and provide access to materials related to the Okavango Delta Management Plan. Maun is 1000 kilometres north of Botswana's capital city, Gaborone, and the University main campus. All these factors have resulted in high demand for access to local materials in electronic form.

The current Library staff of five has been hard won – the remote location of the Centre and the region's shortage of amenities make it difficult to recruit and retain trained people. This is especially true for cataloguing, indexing and technical skills related to the management of electronic materials. In short, with perhaps the exception that it is relatively well funded, the HOORC Library is a good example of the challenges faced by many libraries in Africa: short on appropriate space, experienced staff and technological support, and long on unprocessed collections of high local relevance as well as of high interest to external researchers.

Development of Digitization Strategies

Demand among HOORC-based researchers for materials in the Botswana (BDSC) collections in the Main Campus Library, and by Main Campus researchers for similar materials in the HOORC Library, led in 2005 to an agreement between the inter library loan teams of the two libraries to scan these materials on request, and link them to the catalogue shared by all University of Botswana (UB) libraries. This removed the need to send documents by post or courier (with the risk of loss or damage) and supplied documents for requesting researchers, at the same time building up a collection of digital versions of local materials that would become more widely available.

This arrangement has worked well, albeit slowly in terms of building a digital collection. Connectivity issues and lack of scanning equipment limited the HOORC Library participation in the arrangement for some time, so that most of the work has been carried out at the University Main Campus. There are now approximately 500 digital versions of local documents saved on the Library Services catalogue server. Access to the full text is at present restricted to members of the UB Library system.

Documents selected and digitized through this process include: *The Gravity Survey of Ngamiland 1970/1*; *Developing a sustainable national research capacity in environment and natural resources : a way forward for Botswana : synthesized summary of workshop proceedings* (1998); *Drought impacts and adaptations : socio-economic aspects of the 1979 Kgatleng drought* (1981); *Phane, its exploitation and conservation in Botswana* (2001); *Desertification in North-Central Botswana: causes, processes and impacts* (1996); *National Health Status Evaluation Programme Epidemiological Survey : community diagnosis - Health Region 6 Southern District* (1987); and *Hunting regulations in Botswana* (undated).

Digitization work at the HOORC Library might well have continued with this slow, incremental, low cost and politically uncontroversial approach if it had not been for the launch at HOORC in 2006 of the "Building Capacity for Biodiversity Conservation in the Okavango Delta (BIOKAVANGO)" project funded by the Global Environment Facility. BIOKAVANGO included in its knowledge management goals the strengthening of HOORC as a repository and conduit for data and information that would improve the Okavango community's understanding of conservation issues and increased capacity for monitoring the state of the Okavango's environment. Improved access to the legacy resources at the HOORC Library fitted into a package of activities to support these aims.

The Digitization Work

The HOORC Library choice of legacy materials to include in the project's work was influenced by several factors, including the need for experience, the limited time frame, the processing state, the level of community interest, the unique materials and the opportunity for institutional partnerships.

The HOORC Library had no previous experience with digitization of entire collections, so we wanted to start small and to learn as we went along. The BIODIVERSITY project had a five year lifespan and digitization work could only begin more than a year into the project, as recruitment of contract staff and procurement of equipment were time-consuming processes.

Researchers and community members involved in the tourism industry had expressed interest in the content of the three legacy collections held by the library, especially in the Pete Smith Collection. A full inventory and a finding-aid for this collection, made with the assistance of the Main Campus Library Archives unit the previous year, had identified among the collection's unique original materials 43 1:50,000 scale maps annotated by Smith on his trips into the Delta in the 1970s and 1980s. The combination of limited size, high-interest value and opportunity for partnership with the University Archives and the HOORC GIS Laboratory, made the annotated maps the logical choice for the Library's first digitization project.

From the Library point of view it was the right choice. In a year and a half, we have managed to recruit a team of two young Batswana and train them in digitization techniques; to acquire and learn how to operate scanning equipment and specialized software; to work closely with, and learn from, the Centre's GIS Laboratory and Main Campus Archives team; to work closely with academic staff and researchers who proof-read the annotation transcriptions; and to engage the broader community in recognizing the value of its natural resources. In addition we have a product: a web site that allows searching of the approximately 5000 annotations on the maps and online display of facsimiles of the maps themselves – valuable baseline data to support biodiversity monitoring work.

Political Implications

From the point of view of the research and broader communities, including politically sensitive African archivists and librarians, was it the right choice? In 2007 I presented a paper, about our planned digitization of materials from the Pete Smith, Heinz and Bell collections, in Malawi at the third meeting of AFRIAMSLIC, a group of African aquatic science librarians and researchers (Morrison, 2007). A young government fisheries researcher asked the question, "Why are you choosing to work on the materials of these white men instead of with the knowledge of our own people?" My response was, of course, that the material was there, clearly of scientific value, in codified form, and in demand by researchers. But the question stuck with me over the following year as we progressed with arrangements for the digitization work.

As we approached completion of digitization work on annotated maps, we decided to publicize the work through a community event. May of this year [2009] was the tenth anniversary of Pete Smith's death. The HOORC commitment to recognizing with a permanent memorial his contribution to Okavango Delta knowledge became an opportunity for letting the community know about the new resource. The Library

organized an exhibition of reproductions of the maps and photographs from Smith's collections to display with on-site access to the new digital resource, and, at the end of the week-long exhibition, unveiled a memorial sculpture at Smith's burial site. The events were happy ones and, from the point of view of inclusiveness, a success, with representation from the entire Maun community and participation by retired Batswana colleagues of Smith who attested to his willingness to share his knowledge and to interact with local community members. There were, however, more questions from some of HOORC's own academic researchers about the appropriateness of focusing resources on a white man who, in the end, was not a trained researcher, instead of on Batswana who had also made valuable contributions.

Parallel to the digitization work on the annotated maps, the Library had launched other activities to help the surrounding community understand HOORC's research activities and understand the value of legacy materials in the Library collections. Among these was weekly serialization in the local newspaper of book content from early explorers' accounts of travel in the Kalahari region. The question was raised by some academic staff members as to whether this was an appropriate use of resources when the language used and attitudes expressed by the writers was so clearly racist?

The cost of the annotated maps project has been approximately Pula 468,700 (US\$68,837) with the following breakdown:

Contract salaries for digitization team	186,500
Travel and accommodation expense for archival team members	52,200
Purchase of archival and media supplies	23,000
Purchase of equipment	35,000
Technology consultancy fees, web development	50,000
Purchase of software	20,000
Training of digitization team	35,000
Proofreading honoraria	27,000
Promotional activities	50,000
Total	478,700

Given that the greatest expenses (just over 50%) were for human resources, the BOKAVANGO project goal of capacity building appears to have been satisfied. Hardware and software acquired through project funds will continue to support digitization activities for HOORC for several years, while archival preservation supplies will continue to do their job for many years to come, as will the web-based resource and memorial. Is this enough?

Conclusion

The HOORC Library foray into digitization has raised questions that are no doubt being confronted by libraries and other cultural institutions across the continent. If it

is more appropriate to focus on knowledge embodied in oral traditions, do we ignore the data and insights recorded by colonial and expatriate participants in African history? Our experience with both incremental and collection-based approaches has demonstrated that it is possible to capture and share this type of resource while engaging the local community in an inclusive way. We cannot ignore or even avoid the legacy of colonialism, with its attendant emotions, but if we face it, making practical decisions based on an understanding of both the materials we steward and of the communities that have created them, we can build a sense of African ownership of African resources.

References

- Britz, J. and Lor, P. (2004). A moral reflection on the digitization of Africa's documentary heritage. *IFLA journal*, 30(3), 216.
- Kagan, A. (2007). Report on the workshop on the politics of digital initiatives concerning Africa. *ALC Roundtable: African writing, African publishing, African repositories: globalization and beyond*, 6. Retrieved from <http://www.indiana.edu/~libsalc/african/ALN123/123kaganworkshop.html>
- Limb, P. (2005). The digitization of Africa. *Africa Today*, 52(2), 2-19.
- Magole, L. and the Okavango Delta Management Plan Project. (2007). Public participation in the ODMP strategy. *Conservation news Botswana*, 9(3), 6-13.
- Mbaiwa, J. E. (2005). The socio-cultural impacts of tourism development in the Okavango Delta, Botswana. *Journal of tourism and cultural change*, 2(3):163-184.
- Morrison, M. (2007). *The potential contribution of personal collections to regional biodiversity knowledge : planning digitization work at the University of Botswana's Okavango Research Centre library*. Paper presented at the AFRIAMSLIC Meeting 3rd.
- Schwartz, J. and Cook, T. (2002). Archives, records, and power: The making of modern memory. *Archival Science*, 2 (1), 1-19.