

Research Archive and Resource Centre for Human and Natural History (RARC) Circle

May 12, 2004

The Proposal:

A Research Archive and Resource Centre for Human and Natural History (RARC) is proposed for the UBC - Southern Interior. The RARC will provide the catalyst for human and natural history research in the region and province, trigger and support several graduate programs at the new university, promote research synergies and collaborations between and within disciplines in Arts and Science, promote the creation of various research institutes at the university, meet the archival needs and establish research linkages with Interior communities (including with our Okanagan partner, the En'owkin Centre), link with archives and researchers throughout Canada and the world, and promote R & D spin-offs in the community.

Goals of the Research Archive and Resource Centre:

The Archive and Resource Centre will meet numerous goals:

- To assist the university, civic governments, Indian Bands, educational, health and other public institutions, businesses, improvement districts, churches, labour unions, and individuals to preserve, organize, and make accessible their archival records. Professional archivists and graduate students would offer these institutions a variety of services, to identify archival records, create retention and disposal schedules, and organize, digitize, store, and make accessible their archival resources. This will be a continuing, cost-recovery project that will allow institutions to reduce their physical holdings and obtain improved organization and access to their records.
- To provide, over time, significant digitized archival resources to researchers and institutions. Teams of graduate students would visit local institutions to digitize their archival holdings, and then to organize them and publish them on the internet. The concurrent benefit will be to make those records available to researchers, graduate students and the public.
- To provide assistance to our partner, the En'owkin Centre, in performing its legitimate archival functions. En'owkin's objectives are "to maintain, protect, increase, and house existing archives and cultural resources for the use of the Okanagan Nation as well as monitoring and controlling access and use based on the cultural protocols of the Okanagan Nation." En'owkin wishes to share its excellent cultural archive and library holdings within a respectful relationship of collaboration.
- To organize the data and archival resources on a GIS-based platform, which will provide the capability of presenting human and natural history data organized in both time and space.
- To provide a platform for community-linked graduate programs planned by various Arts departments. Examples are Masters degrees in Public History (and an opportunity to cooperate

with UBC-Point Grey with its MA in History and Archival Science), Indigenous Studies, and GIS applications.

- To provide a platform for graduate programs in Science, to name a few, in the fields of Conservation Biology, Watershed Management, Ecosystem-based Resource Management. The only limitation here is one's imagination.
- To provide a resource for computer science (and statistics) undergraduate and graduate students. Areas of interest such as data mining, data compression and storage techniques, image processing, and search engines abilities could be developed through undergraduate thesis or directed study courses. An obvious computer science graduate program to emerge from this initiative could focus on image processing, character or pattern recognition, and computer graphics. The archive would be used to support research projects such as pattern recognition, image processing, data modeling and system simulation. Research could extend beyond those topics to others such as the modeling of a complex environment and the simulation of variations in this environment, the study of the interaction between human and computer by the use of holograms for archive storage or display, or of virtual reality to enhance data simulation.
- To provide a location for the storage of digital field data (for example, stream temperature data) for access by researchers of climate change, environmental impact, and water management.
- To store DNA related to the study of Species at Risk and Conservation Biology
- To store chemical fingerprint analyses in a variety of fields. At present, chemical fingerprinting is a critical component in viticulture and ethno-botanical research but future applications include medical, forensic, culinary research.
- To serve as a repository for regional collections, particularly in archaeology. This enables the securing of valuable information while making it available for research locally and as a node in a world-wide archival system.
- To provide a climate-controlled storage capability and security for textual/audio/visual collections of the community and for artifact and specimen collections of disciplines such as paleo-limnology, ethno-botany, archaeology, zoology, botany, and geology.
- To provide a resource centre for research into land claims, local government, environmental science, resource use, and other selected themes. This will involve acquiring microfilm copies of record collections from archives such as NAC, BCARS, and the HBC. Census and taxation records, newspaper collections, photograph collections, historic books, legislative records, and other resources will be collected to provide a major research resource.
- To connect with established electronic networks in museums and archives throughout the province and the world.
- To serve as an archive for UBC-O and predecessor institutions.
- To have several viewing areas that would serve to showcase research projects occurring in the building and standing exhibits including one for the En'owkin Centre, and others with topics

related to European settlement in the southern interior, earth processes & environmental change, and environmental biology.

Relationship to University Circles Guidelines:

The Research Archive and Resource Centre for Human & Natural History is a university-wide, innovative project aimed at improving research, teaching, and community relations. It builds on substantial development at OUC, encourages a distinctive, interior-based research thrust, provides opportunity for significant student employment and learning, and provides a defining research presence at the new university. This archive meets some of the significant needs of OUC researchers in many different disciplines and proposes an innovative academic structure to channel the development of UBCO. It facilitates collaborative research among departments, and will trigger the creation of several graduate programs.

Relationship to University Vision Statements:

Graduates involved with the archive will assist the UBCO to develop links to the community of the southern interior of BC. Their appreciation of Natural & Human history will provide a basis for their continuing contribution to their community within the context of a sustainable society. This proposal facilitates ongoing research in social and natural sciences while being able to evolve to meet the needs of future academic programs. If realized, it will be embraced by interested departments and will have a positive influence on recruitment efforts.

We envision the RARC at one apex of a triangular public gathering area with a museum and a performing arts centre at each of the other apexes. The public space would have benches and walking areas with presentations on local dry interior plants and a sunken amphitheatre with covered stage. Beneath the garden and walkway area would be hallways to link the three buildings and the backstage of the amphitheatre. This would enable smooth cart movement between building at time when closed to the public. Along the halls would be washrooms, several small stores, an information kiosk, and food outlets. Such a complex would act as a tourism and school bus visitation destination, placing UBCO into the minds of valley residence and visitors.

[Several documents that relate to the proposal appear within the appendix that follows.]

Appendix

Proposed Personnel

Administration:

- Project Directors or Manager
- Archivist
- Community outreach archivist
- Computer specialist
- Data acquisition specialist

Associated Professors

Estimated at 30. Perhaps two to four from each of the 10 departments.

Technical staff

Estimated at 6. (Collection environment maintenance, computer and web-site maintenance, collection preparation (3), displays (3))

Graduate students

Estimated at 50 located in research pods of 3.

Secretarial

Estimated at 4.

Space Requirements in square feet:

Offices for personnel listed above at 12,000

Research space at 18,000

Computer centre at 1,500

Service room(s) (printers, scanners, etc) at 1,000

Galleries (6 at 5,000 each)

Meeting rooms. Two at 300 sq. ft. each

Class rooms

- Computer lab 500 sq. ft.

- Two lecture rooms at 500 sq. ft. each

- Public entrance, lounge, displays, reception at 3,000

- Archive and resource centre viewing rooms

 - Public: one at 500 sq. ft.

 - Research (visitors): 3 at 200 sq. ft. each

Archive preparation area at 3,000 (digitizing, biological, artifact, art, etc.)

Climate control facilities

- Ambient at 10,000 (placed such that it is with a capacity for building growth)

- DNA at 500

- Biological specimens at 1,000

- Chemical fingerprints at 500

- Paleolimnological cores at 1,000

Woodwork shop (support to collection and display preparation)

GIS lab, map room, and support computer support facility (1,000 sq. ft.)

Two vehicle loading dock and temporary storage area at 1,000.

Washrooms and facility management at 3,000.

Total estimated square footage is 90,000 as a minimum.

The future addition would permit expansion of collection storage and areas for 20 more faculty and associated research space should be 20,000 sq. ft.

Time-line:

Building completed by 2008 in order to be fully functional by 2010.

The new archive staff should work out of a temporary physical space of 2,000 sqft. Within this they can plan for the building, establish procedures and protocols, negotiate contracts with civic authorities, establish software architecture, establish contacts with the archive community and establish the place of the archive as a node in the southern interior.

Personnel hiring:

Project director, archivist and community outreach individuals should be employed as soon as possible (before Fall 2005 in order to stay on the completion time-line of 2010). Professors will be needed as soon as possible in order to develop and obtain supporting grants. Computer support group and archive technical staff are needed two years before building completion in order to follow and influence construction details and begin processing collections and data.

List of interested faculty, administrators, and public:

Peter Dill (Biology)
Duane Thomson (Professor Emeritus, History)
Dan Durall (Biology)
Jeff Curtis (Earth & Environmental Science)
John Greenough (Earth & Environmental Science)
Robert Young (Geography, E&ESc)
Patricia Lasserre (Computer Science)
Alan Paeth (Computer Science)
Jeannette Armstrong (En'owkin Centre)
Richard Garvin (Anthropology)
Naomi McPherson (Anthropology)
Bryan Ryley (Fine Arts)
Briar Craig (Fine Arts)
Bob Belton (Dean of Arts)
Bernie Bauer (Dean of Science)
Gwen Zilm (Information Services)

Rob O'Brien (Chemistry)
Nigel Eggers (Chemistry)
Sylvia Esterby (Math & Stats)
John Wagner (Anthropology)
Eileen Truscott (Fine Arts)
Maury Williams (History)
Bill Cohen (Indigenous Studies)
Robin Dods (Anthropology)
Diana French (Anthropology)
Adam Wei (Earth & Environmental Sciences)
Claire Budgen (Nursing)
John Smith (BC Tree Fruits)
Pauline Terbasket (Okanagan Nation Alliance)

List of Departments that have interested faculty:

Biology
Chemistry
Earth & Environmental Sciences
Mathematics & Statistics
Computer Science
Anthropology
History
Fine Arts
Indigenous Studies
Geography
Nursing
Sociology

Supporting statements from several faculties:

Dan Durall (Biology)

OUC has recently created a Centre for Species at Risk and Habitat Studies (SARAHS). Funds from Canadian Foundation for Innovation matched by other agencies to a total of \$2.2 M will support the development of a GIS lab, a molecular genetics lab, and physiology lab. State of the art instruments, including a DNA sequencer, will also be purchased for these labs. The centre will support OUC faculty from five different departments and partners throughout the valley. The storage of whole specimens and DNA samples at the archive is a needed element for this Centre's success.

Ian Walker (Biology)

I understand that the proposed RARC centre would include appropriate storage facilities for lake sediment cores (i.e., core storage racks in a large, humidity-controlled facility, maintained at 4°C). Once sediment cores have been dated, and initial analyses have been performed on the sediment layers, they remain an invaluable resource for environmental impact assessment. For example, it is not uncommon for palaeoecologists to later return to archived sediments to re-analyze the sediments at higher temporal resolution, or using new methods, and frequently to address new research questions.

Appropriate core storage facilities are not currently available at OUC. In British Columbia, a similar facility (for marine cores only) is maintained at the Pacific Geosciences Centre in Sidney. To my knowledge the nearest comparable facility for lake sediment cores is at the Limnological Research Centre at the University of Minnesota (<http://lrc.geo.umn.edu/corefac.htm>). Their facility also includes an array of specialized laboratory space, facilitating a range of state-of-the-art analyses on lake sediment cores. The University of Minnesota facility is too distant to be useful to researchers in British Columbia. If such a facility was available at UBC Okanagan, it would greatly facilitate my research, and create a unique Canadian facility. By attracting new faculty and graduate students to UBC-Okanagan it would build on our current recognized strength in palaeoecological and environmental change research, as noted by the UBC-O research task force.

Adam Wei (Earth & Environmental Sciences)

I strongly support this proposal. From my personal perspective, I believe that the proposed RARC system will greatly enhance our ability to address an important temporal scale issue in natural resource management in the following areas:

- 1). The essence of sustainability is to maintain ecological attributes over long-term or indefinitely. The temporal scale must be considered when managing natural resource and watershed ecosystem for long-term sustainability. The RARC will greatly support this by storing and securing our historical data.
- 2). The proposed RARC will facilitate integrated research and management by pulling our data together in an integrated way. Integration is critical for watershed research and other resource management.
- 3). In specific, the RARC will help me to store GIS data and products, in-stream LWD data and forest disturbance data.

Sylvia Esterby (Mathematics and Statistics)

I support preservation of records that will help to assess environmental change. My primary area of interest is in quantitative methods for the assessment of environmental status and change, and critical to this is the separation of anthropogenic components. Preservation of records of various types can help in establishing baselines and natural cycles. I am interested in seeing records retained in an unaltered state but with adequate supporting documentation to permit assessment of suitability of data for a particular analysis. That is I see myself and statistics students as being users of data and other records and as collaborators with other researchers in preparing different levels of information resources and in producing research results.

Duane Thomson (retired from History)

As Professor Emeritus in the Department of History and active researcher on Native-white relations in the interior of British Columbia, I wholeheartedly support the establishment of the Research Archive and Resource Centre. Over a decade ago, Maury Williams and I attempted to establish an archive to identify, preserve, organize, and make accessible the documentary history of the Okanagan. We consulted widely with existing local archives, local governments, institutions, businesses and individuals. We discovered a great need and woefully inadequate regional archival development.

Faculties at OUC have made considerable progress toward the goal of developing a virtual archive. I received two SSHRCC grants to conduct archival surveys in the Central Okanagan and the South Okanagan-Similkameen, which were completed and published in hardcopy. The Living Landscapes project (<http://www.royal.okanagan.bc.ca>), a website devoted to presenting the human and natural history of the Okanagan (principals Peter Dill, Alan Paeth and Duane Thomson, with coordinator Carol Thomson), was then established in cooperation with the Royal British Columbia Museum. Living Landscapes digitized and published the updated archival record surveys, historic photographs from the collections of public and private museums, the 1877, 1881, and 1891 nominal census records of the Okanagan-Thompson region (with a graphically based search engine), a searchable database of wildflowers in the southern Interior, curriculum projects for Kokanee Salmon Heritage and Endangered Species, significant historic documents and theses, and an index to the periodical *Okanagan History*. I see the RARC as a dramatic expansion of this innovative, award winning project.

RARC will serve as a catalyst for research in the southern interior of BC and support graduate programs planned by the History Department and the Indigenous Studies program (both of which will be focussed on community-based research). It will provide significant digitized archival resources to researchers and institutions, create a vital link to institutions and businesses within the region, and develop a resource centre for research into land claims, local government, environmental science, and resource use.

Patricia Lasserre (Computer Science)

The RARC proposal provides a tremendous opportunity for the computer science department to not only have huge data resources, but also to look at the technical issues related to the storage and use of such an amount of data. It has the potential to enhance educational and research opportunities in many areas of computer science such as data mining, data compression and storage techniques, image processing, computer graphics and search engines abilities. I see RARC has a trigger to develop new collaborations. I am especially interested by the number of disciplines that would benefit from some level of image processing and pattern recognition, as well as the use computer graphic techniques to provide new ways for researchers to interact with their data.

Ben Nilson. (Chair, History Department)

This plan has the complete and enthusiastic support of the history department. An archive is essential to every region, and is particularly essential to historical research. A university without an archive would simply not be fulfilling its mandate. This particular proposal would mesh extremely well with the history department's plan for a masters program in public history, which would make extensive use of the planned facilities and staff. Our MA program will require the presence of historians who will use the archive extensively in their own research. The proposed archive has other innovative features that are particularly useful for this region. Firstly, it is intensely electronic and digital without sacrificing the attention that real materials and documents require. This balance is necessary, for although the Okanagan Valley and UBCO will need a repository of records of their own past the Valley is also relatively isolated and the university will be new. State of the art electronic databases can connect us to the outside world and allow us to accumulate high quality archival material much more rapidly than would otherwise be the case. Secondly, its interdisciplinary connection between arts and science, as well as the vital connection to the En'owkin centre, appears to be a healthy model for the future and promises to create many opportunities for research and community involvement.