

Excerpt from: the Supplement to the Case Study

4. Implementation Gaps & Preliminary Findings:

GCRC's original intent was to implement records management/content management best practices as an integral part of the development of the Cybercartographic Atlas of Antarctica. This poses a practical challenge since best practices are not yet widely agreed upon for this environment. Additionally, there are large knowledge gaps regarding record and document management software, and their function, metadata standards for scientific georeferenced digital multimedia objects, the preservation of web sites, and methods to integrate these into the production phase.

Currently, IP2 Student Researchers at UBC on the request of Case Study Team member Yvette Hackett are conducting a literature review on the preservation of web sites, which may yield some useful results. The Archival Preservation of Smithsonian Web Resources: Strategies and Principles and Best Practices, (<http://www.si.edu/archives/archives/dollar%20report.html>) along with other documents may be of assistance.

Some preliminary research has uncovered two government remote sensing data archiving initiatives such as the US Congress mandated Department of the Interior National Satellite Land Remote Sensing Data Archive (<http://edc.usgs.gov/archive/nslrda/overview.html>), and the Natural Resources Canada project called the Ground Systems Operations Section (GSOS) (http://dweb.ccrs.nrcan.gc.ca/ccrs/db/Staffdir/orgchart/tmpGSOS_e.cfm?SectionID=8). Also, the US National Center for Supercomputing Applications has developed software tools and processes to enable the archiving of digital scientific data (<http://hdf.ncsa.uiuc.edu/>). These initiatives will have to be examined further and additional research into other initiatives is required.

Anecdotally, it has been suggested that industry standards for digital multimedia objects have not been developed for proprietary reasons. There are however some potentially useful specifications in the education domain for the cataloguing of learnware/courseware or e-learning objects. Some of the potential specification may be CanCore (www.cancore.ca), IMS Learning Object Metadata (<http://www.imspj.org/>), IEEE - LOM Institute of Electrical and Electronics Engineers - Learning Object Model (<http://ltsc.ieee.org/wg12/>), and Sharable Content Object Reference Model (SCORM) (<http://www.adlnet.org>). The Canadian Heritage Information Network (CHIN) provides some useful information (http://www.chin.gc.ca/English/Standards/metadata_multimedia.html), as does Industry Canada Eduspecs (<http://eduspecs.ic.gc.ca/en/>). While these may be useful for addressing multimedia metadata object issues for non-scientific data, it remains unclear if they can be applied to Cybercartography and scientific data.

While metadata and the preservation of Web Sites may be partially addressed with some of the above initiatives, methods of capturing the process and the content

remain uncertain. To date many of the record/content management initiatives have been for text based processes. In Canada some government departments such as Public Works and Government Services Canada (PWGSC), the National Archives, Department of Justice and others are using document and record management software. The commonly used software are Docs Open (document management software), document management software integrated with iRIMS (records management software), or integrated with Foremost. Other recommendations have been TRIM - an Australian package (with Canadian distributor) which claims it is both document and records management fully integrated in one package, digital asset management software might be useful for animation and as previously indicated CVS software has been used by members of the GCRC team to capture open source code versioning. Expert advice from the field of multimedia would be an asset here.

The National Atlas of Canada manages the content of the Atlas with ZOPE an open source document/content management system (<http://www.zope.com/>). A Swiss based proprietary software solution was also recommended, OBTRIEE C4 (<http://www.obtree.com>), while the Canada Housing and Mortgage Corporation uses PaperThin a fusionware product (<http://www.paperthin.com/Products/Index.cfm>). GCRC will have to carry out further research on these and potentially other products to meet the document/content management needs of the Cybercartographic Atlas of Antarctica.

Currently Carleton University as an institution does not use content or document management software. The Carleton University Archive also does not use this type of software nor does it archive digital data sets. The Carleton University archivist has shown interest in the GCRC work and may assist with expert advice as needed while the Data Centre may collaborate in assisting with beta testing GCRC archiving processes.