Building Capacity in Digital Preservation: Theoretical Issues, Practical Applications

Project Overview

Richard Dancy, Staff Archivist
Simon Fraser University Archives and Records Management Department
Study Leave 2018 Project
January 28, 2019
SUMMARY

This document reports on a study leave project undertaken in 2018 to look at digital archiving and preservation practices being developed in the field and how SFU Archives might adapt these to improve its own practices. The study was conducted through readings, site visits, interviews, and experimentation with software tools. This paper provides an overview of the project, the themes investigated, research methods employed, a list of interviews and interviewees, and describes project outputs.
# TABLE OF CONTENTS

## Summary ........................................................................................................................................... 2

## 1. Introduction .................................................................................................................................. 4

## 2. Themes ......................................................................................................................................... 5

Theme 1. Acquisition and transfer ......................................................................................................... 5
Theme 2. Repository management ........................................................................................................... 5
Theme 3. Access administration ............................................................................................................ 5
Theme 4. File format case studies ........................................................................................................... 6
Theme 5. Semi-active records .................................................................................................................. 6

## 3. Methods ........................................................................................................................................ 6

3.1 Literature review ............................................................................................................................... 6
3.2 Software testing ................................................................................................................................ 7
3.3 Site visits and interviews ................................................................................................................... 7

## 4. Terminology .................................................................................................................................... 8

## 5. Project Outputs ............................................................................................................................... 9

5.1 Reports ............................................................................................................................................ 9

1. Transfer: Current Approach (SFU Archives) ....................................................................................... 9
2. Transfer Methods ................................................................................................................................. 9
3. Transfer Utilities ................................................................................................................................ 10
4. Transfer Validation ............................................................................................................................... 10

## Appendices ...................................................................................................................................... 11

A. List of interviews and participants ................................................................................................... 11
B. Statistical profiles .............................................................................................................................. 15
C. Research Ethics documentation ......................................................................................................... 17
1. INTRODUCTION

In 2013 SFU Archives undertook a three-year pilot project to establish a digital repository for the long-term preservation of archival materials in electronic form. By 2016 the repository was operational, with policies, infrastructure and workflows to enable the Archives to accept transfers of born-digital records. The system also preserves the output of the Archives' digitization projects. By the end of 2017, the Archives had processed 7 transfers of born-digital departmental records under the new procedures and ingested xx GB of digitized materials.¹

With this background in mind, I took a 12-month study leave in 2018 (January to December). It seemed a good time to take a step back and take stock, to assess our first steps in digital preservation and see where improvements might be made. The research project would take up a number of problems relating to digital repositories and focus on practices, tools, and workflows being developed and implemented in the field. Information was gathered through readings, site visits, interviews, and experimentation with software tools.

The goals of the study were to:

- Identify gaps and weaknesses in SFU Archives' current approach.
- Review emerging practices that address these and look at how they are being implemented at other institutions.
- Adapt findings to SFU Archives' situation.

The project examined five broad themes: acquisition and transfer; repository management; access administration; file format case studies; and management of semi-active records with long retention requirements.

Study findings are set out in a number of individual reports. These are intended to be self-contained papers that can be read more or less independently of the others. While the primary audience for these papers is SFU Archives, the topics they cover are relevant to most archives, and I have tried to write them in such a way that colleagues at other institutions might find them useful.

For reasons described in section 3.3 below, the focus of the project shifted somewhat over the course of the year. The reports in fact deal mainly with just the first of the five themes, namely the transfer of digital materials from producers to repositories.

The present paper gives an overview of the project as a whole.

- Section 2 summarizes the main themes investigated.
- Section 3 looks at research methods employed.
- Section 4 provides comments on common terminology used throughout the study reports.

¹ The repository's total holdings by the end of 2018 was about 10TB, reflecting a major project led by Shyla Seller in 2018 to digitize audio and audio-visual materials in the Archives' holdings.
• **Section 5** describes the different papers that were produced as an outcome of the project.

• **Appendices** provide additional information relating to the site visits and interviews: a list of all interviews and interviewees, as well as the some of the accompanying documentation produced as part of the SFU Research Ethics process.

My sincere thanks to all who participated in the study and generously shared their time, experience and expertise in the site visits and interviews. In total I conducted 38 interviews over about 60 hours with 89 individuals representing 36 institutions, all but two based in Canada.

The project was undertaken during sabbatical from SFU under the provisions for study leave in the Simon Fraser University Faculty Association collective agreement. All funding came from my SFU salary. Thanks to the university and to the Archives for supporting the leave.

The project required and received SFU Research Ethics approval. Thanks to the Office of Research Ethics for helping me navigate the application and approval process.

2. THEMES

The project looked at five broad themes.

**Theme 1. Acquisition and transfer**

What kind of digital records do institutions actually acquire? What workflows and tools support the transfer process? What transfer metadata do they capture, how is it generated, stored, managed and used?

**Theme 2. Repository management**

What systems and tools do institutions use to manage their storage repositories? How do they search and retrieve items from holdings and generate statistical reports? How to manage integrity checking, plan migration to new file formats, and administer backup and recovery?

**Theme 3. Access administration**

How do institutions provide access to digital records? How have their descriptive practices evolved to accommodate digital materials? Does personal or confidential information aggregate in predictable ways in electronic record-keeping environments, how do institutions identify such information and secure it in the context of their access systems? How do they manage third-party copyright in digital holdings?
Theme 4. File format case studies

How do institutions deal with certain problematic record types and file formats? I was interested especially in email, websites, databases, architectural drawings, photographs, audio and audio-visual materials, Microsoft Office-suite documents.

Theme 5. Semi-active records

How do institutions provide for digital records that have long retention requirements (e.g. 10+ years) but are not archival, i.e. will be destroyed at the end of their retention period? Are they experiencing any demand from their parent organizations for such services?

3. METHODS

The study employed three main methods: literature review; software testing; and site visits and interviews.

3.1 Literature review

The literature relating to digital preservation is voluminous and growing. Within it, several genres can be identified.

Institutional internal documentation is typically produced by an organization for its own internal staff use; examples include policies, procedures, planning studies, and reports.

Standards and guidance documents are aimed at the wider community to provide a common framework for professional practice across institutions; examples include the suite of standards relating to the Open Archival Information System (OAIS) and the Trusted Repositories Audit Certification (TRAC) checklist.

Institutional and project communications disseminate the results of work; projects are often collaborations across a number of institutions; the audience for the communications may be the broader institution (other units) or the wider profession (other institutions and practitioners) or both; examples include annual reports, project reports, conference presentations.

Theoretical and historical studies and analyses are typically self-contained published works appearing as books or articles in peer-reviewed journals.

"Workflow literature" often cuts across this distinctions, aiming to show how practitioners in a certain institutional setting tackled a specific problem, with particular attention to the use, development, and integration of various software tools and utilities. For examples, see the studies collected in the recent publication edited by Philip Bantin, Building Trustworthy Digital Repositories (Bantin 2016); the nine issues of the online journal Practical Technology for Archives (2013-2018; now unfortunately discontinued); and the recent OSSArcFlow project investigating open source software (OSS) tool integration and workflow development.

All these streams of writing were useful for my study. In most of the project papers I have included a References section that gathers citations to works, projects, websites and software referenced in the paper.
3.2 Software testing

The use of software tools and utilities for automating certain tasks is a critical component of digital preservation work. As part of my study, I installed and experimented with a number of applications, including:

- **ePADD** (email archives).
- **Exactly** (digital transfers).
- **Bagger** (digital transfers).
- **Fixity** (integrity checking).
- **Brunnhilde** (analysis of file directories).

3.3 Site visits and interviews

Site visits were at the centre of the project. There were in total 38 interviews with 89 individuals representing 36 organizations. Of these, 34 represented repositories that hold digital materials or had some responsibility for the transfer and/or long-term preservation of archival records. All but one interview was conducted in-person (the other by telephone). All of site visits but two took place in Canada. Altogether the interviews totaled just under 60 hours. See Appendix A for a list of all interviews and Appendix B for various statistical profiles.

There was no pretense to a scientific basis for the selection of site visits and interviewees. I wanted to get a good picture of the situation across Canada. I was interested in institutions that are actively doing work in digital preservation, but also in those that are similar in mandate and scope to SFU Archives regardless of where they were at with their digital archives programs. Some institutions were identified on the basis of pre-existing personal contacts, others from the literature review. In some cases, if I was going to a particular city I would try to interview as widely as possible there. Even still, I am all too aware of having missed, for one reason or another, institutions I should have visited and individuals I should have spoken with. While my focus was on institutions that were actively engaged in digital preservation, I also wanted to hear what colleagues across a variety of institutions and situations were thinking or planning around these issues. And while it was gratifying to learn about successes, I was as much interested to hear about difficulties, obstacles and things gone wrong.

My original plan was to interview widely in Canada, then more selectively in the United States and Europe. Most of the Canadian site visits were done by late spring. As I began over the summer to sift through the interview data I had accumulated thus far, a number of things about my project became apparent. For some of my themes, I had a lot of material; for others (e.g. theme 5) very little. While I went into the interviews with a set script of questions (see Appendix C), not all were relevant to all institutions; actual interviews were more conversational and often followed threads in interesting ways that went beyond the original questions. There were, as noted above, institutions and projects that I had been unable to interview. In short, I did not really have a representative set of data because of the institutions I missed, nor a consistent set of data because of the way in which it was gathered.

This made me re-think my plans. There was too much material for a single report, but it was too uneven for a series of reports based on my five themes. I decided instead to focus on a number of smaller, more self-contained topics clustered in theme 1 (transfer). This allowed me to investigate at least one function fairly thoroughly. It does mean, however, that many of my original research questions go unaddressed.
From the outset my intention was not to make a complete survey or systematic presentation of the "state of the art." The goal was neither to produce scientific knowledge about a certain population and their practices (archivists and archival institutions), nor to write a narrative of who is doing what in the field. The interviews impressed upon me both the difficulty of such a project and the unsuitability of my own data and methods for achieving it. Instead of a comprehensive comparative study, what I sought in a more random way was to learn about others’ experiences in order to come back with a fresher look at my own and my own institution's. The interviews gave me that.

In the end, however, I decided to scale back on the non-Canadian site visits. The daunting number of potential sites, the evolving (and narrowing) focus of my project, time and financial considerations all played a part in this decision. I did not visit the United States. European interviews were limited to just two institutions that I was able to visit en route to a conference (Semantic Web in Libraries 2018) in Bonn, Germany in November – the Danish National Archives in Copenhagen and the International Institute for Social History in Amsterdam.

In retrospect, it seems clear that there were downsides to the overall approach of my project. In effect I interviewed extensively (in Canada) rather than systematically. If I were to reverse this, I would start first with a widely distributed written questionnaire; then on the basis of the responses, identify institutions for follow-up interviews and site visits focusing on what I wanted to see. This would likely yield a more reliable set of data for comparisons and generalizations.

But that would also be a different project. It could be a future one, it might or might not be a better one. I doubt however that at the beginning of the present study I would have produced a very good questionnaire. In the papers that follow I draw on ideas and materials from the site visits where appropriate. The Appendices provide the list of interviews and participants (Appendix A), with various statistical breakdowns (Appendix B). But I have not attempted a quantitative analysis of the interview data itself.

4. TERMINOLOGY

Throughout the project reports I have tried to be consistent in terminology, generally staying with terms from the Open Archival Information System (OAIS) reference model (ISO 14721) and its companion piece the Producer-Archive Interface – Methodology Abstract Standard (PAIMAS, ISO 20652).

Acquisition is taken in the broad sense of the "process of adding to the holdings of a records center or archives" (Multilingual Archival Terminology database s.v. Acquisition).

Transfer is understood more narrowly as an activity that involves the physical movement of digital materials from one entity to another, “the act involved in a change of physical custody” (PAIMAS, 19).

For the entities involved in a transfer, I’ve used producer the preferred term for the entity that does the sending: "those persons or client systems that provide the information to be preserved" (OAIS, 25). This leaves neutral whether that entity (from the archival point of view) is a records creator, collector, custodian or donor; or whether
it is a contact person, an office with some other responsibility over the records, or even just an information system operating automatically.

For the receiving entity I use the OAIS archive (singular) as the preferred term: "an organization that intends to preserve information for access and use by a Designated Community" (PAIMAS, 17). Archives (plural, capitalized) is generally reserved for specific institutions (e.g. SFU Archives, the Archives). While my focus is on archival institutions, there are common problems and approaches that cut across all organizations that acquire and preserve digital materials, whether they are galleries, libraries, archives or museums (GLAMs); I've used institution as the blanket term. More idiosyncratically I have kept repository mainly for the physical and digital infrastructure an institution uses to store and manage holdings.

Finally, I generally use the neutral term digital materials for the stuff being transferred, reserving records for contexts in which the problems discussed are specific to archival institutions (rather than GLAMs in general). The OAIS term Submission Information Package (SIP) seems potentially confusing here because in some preservation systems (e.g. Archivematica) a SIP is something created out of transferred materials following the change of custody. Transfer package is preferred here to signify the combination of objects and metadata that is actually delivered.

5. PROJECT OUTPUTS

Project findings are set out in a series of four reports. For the reasons described in section 3.3 above, the papers do not take the form of a quantitative analysis of interview data or a comprehensive narrative of who is doing what. The reports deal mainly with problems relating to the first project theme, the transfer of digital materials from producers to repositories.

Why the focus on digital transfer? In part it was because I had accumulated more material on this theme than others. As I began writing, I found the topic growing, and it seemed large enough to warrant extended treatment, but narrow enough to allow comprehensive investigation.

5.1 Reports

As of current writing (January 2019), two of the four reports have been completed.

1. Transfer: Current Approach (SFU Archives)

This paper provides an overview of SFU Archives' current management of digital transfers. It describes supporting infrastructure (hardware and software) and workflows. It identifies a number of problems with the current approach and articulates requirements for addressing them. Subsequent papers in the report series take up the different problems and propose solutions.

January 2019

2. Transfer Methods

Transfer is an act of exchanging custody, moving digital materials from producers to archives. This paper identifies six methods for transferring digital materials (producer self-deposit, mediated transfer, system export, collection /
harvest, mixed analog / digital transfer, unstructured delivery), and two border cases that could be construed as "acquisition without transfer" (distributed custody, digitization). For each it provides a definition, offers examples and description, looks at some of the issues relating to the method, reviews practices in the field, identifies potential applications and SFU use cases, and makes recommendations for possible actions by SFU Archives to initiate planning and implementation.

[In progress]

3. Transfer Utilities

Transfer utilities support and automate the transfer of digital materials from producers to repositories. This paper looks at the Archives' own custom-built transfer tool, SFU MoveIt, and compares it with two other widely used open-source applications, Exactly and Bagger. It briefly describes the BagIt specification that all three implement and compares features of the utilities. The report recommends that the Archives retain SFU MoveIt as its preferred packaging application, but make substantive changes to it to support the inclusion of transfer metadata in the transfer package itself; and that the Archives adopt Bagger as its in-house transfer validation tool.

January 2019

4. Transfer Validation

Validation is a process to verify that a transfer of materials from producer to repository was (i) successful (data was not corrupted) and that (ii) the content is acceptable for ingest into the repository. While the first aspect is generally handled by checksums, the Archives' current workflow for the second is manual, ad hoc, potentially both time-consuming and unreliable. The paper proposes a number of criteria for assessing transfer contents and looks at ways these could be formalized and automated. It makes the case for PAIMAS-like "submission agreements" (called here Transfer Agreements) as an instrument that summarizes all criteria in one place.

[In progress]
# APPENDICES

## A. List of interviews and participants

<table>
<thead>
<tr>
<th>Date</th>
<th>Organization / Institution</th>
<th>Interview participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 21, 2018</td>
<td>University of British Columbia Library – Vancouver, BC</td>
<td>Bronwen Sprout – Head, Digital Programs and Services&lt;br&gt;Eirian Vining – Digital Projects Librarian</td>
</tr>
<tr>
<td>Mar 5, 2018</td>
<td>University of Victoria Special Collections and Archives – Victoria, BC</td>
<td>Heather Dean – Associate Director, Special Collection&lt;br&gt;Jane Morrison – Associate University Archivist&lt;br&gt;Dave Young – Records Management Archivist</td>
</tr>
<tr>
<td>Mar 5, 2018</td>
<td>University of Victoria Library – Victoria, BC</td>
<td>John Durno – Head of Library Systems&lt;br&gt;Lisa Goddard – Associate University Librarian, Digital Scholarship and Strategy</td>
</tr>
<tr>
<td>Mar 6, 2018</td>
<td>Royal British Columbia Museum – Victoria, BC</td>
<td>Michael Carter – Manager of Government Records&lt;br&gt;Katy Hughes – Archivist&lt;br&gt;Ember Lundgren – Manager Archival Preservation&lt;br&gt;Emma Wright – Archives Manager</td>
</tr>
<tr>
<td>Mar 13, 2018</td>
<td>City of Vancouver. Access to Information – Vancouver, BC</td>
<td>Siân Madsen – Corporate Records Administrator</td>
</tr>
<tr>
<td>Mar 15, 2018</td>
<td>Royal British Columbia Museum – Victoria, BC (via telephone)</td>
<td>Cheryl Linstead – Preservation Specialist</td>
</tr>
<tr>
<td>Mar 19, 2018</td>
<td>University of Saskatchewan Archives and Special Collection – Regina, SK</td>
<td>Craig Harkema – Head Special Collections and Archives&lt;br&gt;Tim Hutchinson – Archivist, Special Collections and Archives</td>
</tr>
<tr>
<td>Date</td>
<td>Location/Institution</td>
<td>Participants</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Mar 20, 2018 | University of Regina Archives and Special Collections | Crista Bradley – University Records and Information Management Archivist  
Dale Storie – Associate University Librarian, Content Management and Discovery  
Mark Vajcner – University Archivist |
| Mar 21, 2018 | University of Manitoba Library – Winnipeg, MB | Jordan Bass – Coordinator, Research Services and Digital Strategies            |
| Mar 22, 2018 | City of Winnipeg Archives – Winnipeg, MB       | Jody Baltesssen – City Archivist / Records Manager  
Sarah Ramsden – Archivist |
| Mar 22, 2018 | Provincial Archives of Manitoba – Winnipeg, MB | Scott Goodine – Archivist of Manitoba |
| Mar 23, 2018 | University of Winnipeg Archives and Records Centre – Winnipeg, MB | Dan Elves – Information and Privacy Officer  
Brett Lougheed – University Archivist / Digital Curator |
| Mar 24, 2018 | Centre du patrimoine – Winnipeg, MB            | Gilles Lesage – Directeur général                                               |
| Mar 26, 2018 | University of Manitoba Archives and Special Collections – Winnipeg, MB | Shelley Sweeney – University Archivist, Head of Archives and Special Collections  
Natalie Vielfaure – Archivist |
| Mar 26, 2018 | Association for Manitoba Archives – Winnipeg, MB | Elizabeth-Anne Johnson – Chair, AMA Digital Initiatives Committee              |
| Mar 26, 2018 | National Centre for Truth and Reconciliation – Winnipeg, MB | Raymond Frogner – Director of Archives                                        |
| Apr 17, 2018 | Queen’s University Archives – Kingston, ON    | Paul Banfield – University Archivist  
Deirdre Bryden – Archivist (University Records)  
Jeremy Heil – Digital and Private Records Archivist  
Heather Home – Public Services / Private Records Archivist |
| Apr 19, 2018 | Library and Archives Canada – Gatineau, QC    | Victoria Gebert – Digital Preservation Analyst  
Eileen Lim – Digital Preservation Librarian, Digital Operations and Preservation Branch  
Mike Mitchell – Team Lead, Digital Preservation Operations |
| Apr 23, 2018 | City of Toronto Archives – Toronto, ON        | Tricia Blake – Change Management Consultant  
Carol Radford-Grant – City Archivist  
Jim Suderman – Director, Information Access |
| Apr 23, 2018 | Ryerson University Archives – Toronto, ON      | Curtis Sassur – Coordinator of Archives and Special Collections  
MJ Suhonos – Digital Technologies and Projects Librarian |
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 24, 2018</td>
<td>Archives of Ontario – Toronto, ON</td>
<td>Ryan Carpenter – Senior Advisor, Digital Delivery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peter Hinton – Manager, Portfolio Management Office</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chris Sanagan – Senior Advisor, Digital Delivery</td>
</tr>
<tr>
<td>Apr 24, 2018</td>
<td>York University Library – Toronto, ON</td>
<td>Jennifer Grant – Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anna St.Onge – Archivist, Digital Projects &amp; Outreach</td>
</tr>
<tr>
<td>Apr 25, 2018</td>
<td>University of Toronto Library</td>
<td>Grant Hurley – Digital Preservation Librarian</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loryl MacDonald – University Archivist and Department Head</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emily Sommers – Digital Records Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jess Whyte – Digital Intake Librarian</td>
</tr>
<tr>
<td>Apr 27, 2018</td>
<td>Canadian Centre for Architecture – Montréal, QC</td>
<td>Tim Walsh – Archivist, Digital Archives</td>
</tr>
<tr>
<td>Apr 30, 2018</td>
<td>Art Gallery of Ontario – Toronto, ON</td>
<td>Kyle Fraser – Systems Support Analyst</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amy Furness – Special Collections Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marilyn Nazar – Archivist</td>
</tr>
<tr>
<td>May 3, 2018</td>
<td>University of Toronto Library – Toronto, ON</td>
<td>Steve Marks – Digital Preservation Librarian</td>
</tr>
<tr>
<td>May 8, 2018</td>
<td>Mount Saint Vincent University Library – Halifax, NS</td>
<td>Lindsey MacCallum – Archives and Scholarly Communications Librarian</td>
</tr>
<tr>
<td>May 9, 2018</td>
<td>Halifax Municipal Archives – Halifax, NS</td>
<td>David Cogswell – Information Analyst / Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Caitland Cosworth – Archives Intern</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Susan McClure – Municipal Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sharon Murray – Contract Archivist</td>
</tr>
<tr>
<td>May 11, 2018</td>
<td>Dalhousie University Archives – Halifax, NS</td>
<td>Creighton Barrett – Digital Archivist</td>
</tr>
<tr>
<td>Jun 12, 2018</td>
<td>Provincial Archives of Alberta – Edmonton, AB</td>
<td>Michael Gourlie – Government Records Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glynys Hohmann – Manager, Government Records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wayne Murdoch – Director, Collections Management</td>
</tr>
<tr>
<td>Jun 12, 2018</td>
<td>University of Alberta Library – Edmonton, AB</td>
<td>Peter Binkley – Digital Initiatives Technical Librarian</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sharon Farnel – Metadata Coordinator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kenton Good – Digital Infrastructure Librarian</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damian Hollow – University Resources Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Krista Jamieson – Digital Archivist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Umar Qasim – Digital Preservation Officer</td>
</tr>
<tr>
<td>Jun 13, 2018</td>
<td>University of Calgary Archives and Special Collections – Calgary, AB</td>
<td>Nathan Chandler – Audiovisual Conservation Specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regina Landwehr – Associate Archivist</td>
</tr>
<tr>
<td>Nov 14, 2018</td>
<td>Danish National Archives – Copenhagen, Denmark</td>
<td>Jan Dalsten Sørensen – Divisional Head, Digital Preservation</td>
</tr>
</tbody>
</table>
B. Statistical profiles

Institutions: By Type

- Archives: 19
- Library: 7
- Research centre: 2
- Museum: 1
- Government: 2
- Gallery: 2
- Developer: 1
- Association: 2

Total = 36

Institutions: By Province

- BC: 8
- AB: 3
- MB: 8
- NS: 3
- ON: 7
- QC: 2
- SK: 2
- Outside Canada: 2

Total = 36
Participant job titles (total participants = 89)
C. Research Ethics documentation

The following documents were created as part of my application under SFU’s Research Ethics process.

- Study Detail (Jan 12, 2018).
- Research Study Consent Form (Jan 12, 2018).
- Research Study Site Visit Research Questions (Jan 12, 2018).
- Annual Renewal Approval letter (Nov 20, 2018).

These are available on request. I have included here the Consent Form and the Site Visit Research Questions documents were provided to interviewees in advance of site visits.
RESEARCH STUDY
CONSENT FORM

TITLE OF THE STUDY


STUDY NUMBER

SFU Office of Research Ethics Study # 2017s0504.

INVESTIGATOR

Richard Dancy, Staff Archivist, Archives and Records Management Department, Simon Fraser University.

WHO IS SPONSORING THE STUDY?

I am conducting the study during a 12-month study leave from SFU Archives under the terms of the SFU Faculty Association Collective Agreement. The project begins in January 2018 and finishes at the end of December 2018. There is no external funding.

WHAT IS IT ABOUT?

SFU Archives launched its digital repository in 2016. The repository represents our first steps in tackling problems around the acquisition, preservation, and provision of access to born-digital archival records. The digital repository is a work in progress. I want to learn how other institutions are handling similar issues, what tools and workflows they are using and with what results. My goal is to adapt and apply my findings to SFU's situation. I have a number of specific themes I am looking at (see the Site Visit Research Questions document), but I am also interested to hear about your institution's general views, experiences and practices when it comes to digital preservation. I am not aiming to produce a formal survey or study of who is doing what; rather I'm looking for ideas and things that I can adapt for use in my own institution and that others will be able to adapt in turn.
WHAT DOES THE STUDY INVOLVE?
Literature review, environment scan, site visits, interviews, experimentation with software tools.

HOW WILL RESULTS BE PRESENTED?
I will write a report for SFU Archives summarizing my findings with recommendations. I may also prepare an article for submission to a professional journal in the field of archival studies.

WHAT HAPPENS IF YOU PARTICIPATE?
I will come to your institution and talk to you. I will bring a number of questions (see the Site Visit Research Questions document), but will be happy to stray on to other related topics. If you have anything you are able to demo for me, please do. I expect the process will take 1-2 hours, but it can be longer or shorter as you wish. You and your institution will be identified in the research results as a site visit and interview. I will be taking notes, but I will not make an audio recording or transcription of the discussion. After our interview, I will send you a copy of my notes and you may suggest corrections, revisions, additions and deletions.

WHAT ARE THE BENEFITS?
Most of our institutions are in the same boat: conscious of the daunting challenges of digital records management, preservation and access but stretched for time and resources to address them. The more we can build off each other's work, the better. I hope that my report will serve a useful purpose through identification of existing resources and development of practical solutions that others in turn can use as they see fit. Research results will be made available to the archives community, and I will be happy to send you a copy if you would like.

PERMISSIONS
My research project and this document have been reviewed and approved by SFU's Research Ethics Office. Please be aware that I will not be seeking formal permission from your institution to interview you. If this is a concern for you, please advise me and I will make a request for formal permission from your institution.
CONFIDENTIALITY

The success of my project depends on the willingness of professionals to openly share their professional knowledge, experience and insight. I am interested in your institution's policies, procedures, systems, software, tools, and workflows. I am not seeking personal or confidential information.

If there is certain information you want to share only in confidence, I will respect your confidentiality and will not disclose that information. Please indicate to me explicitly information that it is confidential. I do not want to inadvertently disclose anything you are not comfortable disclosing publicly.

I will send you a copy of my interview notes after the site visit. Please review them to ensure that I have got things right. If there is anything there that you are not comfortable sharing outside of our discussion, please indicate it and I will hold it in confidence. I will not disclose that information and it will not appear in any of the research products.

CAN YOU WITHDRAW?

Yes. Participation is completely voluntary. If you decide that you want to withdraw after we have already done the interview, please let me know. Withdrawal means that I will not identify you or your institution as a participant in the study; I will not include in any research product mention of information I could only obtain from the interview; and I will omit your answers from any quantitative tabulations that appear in the research results.

I may still include discussion your institution's practices based on publicly available information (e.g. publications, documents available on your website).

RETENTION AND USE OF DATA

I will retain my full notes for three years after completion of the study, i.e. until Dec 31, 2021. At that time I will destroy or irrevocably anonymize any personal or confidential information contained in the notes. I will retain the remaining notes indefinitely. A copy will be deposited in the files of SFU Archives. I will consider requests from other researchers for access to my notes. I will ensure that no personal or confidential information is shared with other researchers.
QUESTIONS ABOUT THE STUDY?

Please contact Richard Dancy by email at radancy@sfu.ca.

COMPLAINTS OR CONCERNS?

If you have any concerns about your rights as a research participant and/or your experiences while participating in this study, you may contact Dr. Jeffrey Toward, Director, Office of Research Ethics jtoward@sfu.ca or 778-782-6593.

PARTICIPANT CONSENT AND SIGNATURE

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative consequences.

Your signature below indicates that you have received a copy of this consent form for your own records.

Your signature indicates that you consent to participate in this study.

You do not waive any of your legal rights by participating in this study.

___________________________________________  ________________________
Participant signature                          Date (yyyy/mm/dd)

_____________________________________________________________________
Printed name of the participant signing above
RESEARCH STUDY
SITE VISIT RESEARCH QUESTIONS

STUDY

Title
Building Capacity in Digital Preservation: Theoretical Issues, Practical Applications

SFU Office of Research Ethics Study #
2017s0504

Investigator
Richard Dancy, Staff Archivist, Archives and Records Management Department, Simon Fraser University

PURPOSE OF THIS DOCUMENT

The Consent Form accompanying this document provides background to the study. This document outlines the main topics I would like to pursue in our interview, discussion and site visit. Any workflows or software you would be willing to demo for me and any documentation you would be willing to share will be greatly appreciated.

DIGITAL PRESERVATION PROGRAM

Does your institution have a mandate to acquire digital records? Do you have policies in place? What kinds of infrastructure (hardware, software, disk space, network) do you employ? What kinds of resources (financial and staff) are available for digital preservation?

ACQUISITION AND TRANSFER

What kind of digital materials do you acquire? Institutional and / or private records? Have you had to adapt your appraisal practices to deal with digital records? How are materials transferred? What tools support the transfer process? What kind of transfer metadata do you capture, how is it generated, stored, managed and used?
REPOSITORY MANAGEMENT

What systems and tools do you use to manage digital objects in your storage repository? How do you search and retrieve, generate statistical reports, check integrity? What backup and recovery systems do you have in place?

ACCESS, PRIVACY, COPYRIGHT

How do you provide access to digital archival records? Have you had to adapt your descriptive practices to deal with digital materials? Does personal or confidential information aggregate in predictable ways in electronic record-keeping environments? How do you identify personal or confidential information in your digital holdings and secure it in the context of your access system? How do you manage third-party copyright in digital holdings?

FILE FORMATS

What kinds of digital file formats have you accepted into your repository? Do you communicate with records creators about file format issues? How do you deal with certain problematic digital record types, for example email, websites, databases, moving images, architectural drawings? How do you manage and plan migration to new file formats?

SEMI-ACTIVE RECORDS

Does your institution provide preservation services for digital semi-active records that have long retention requirements (e.g. 10+ years) but are not archival, i.e. will be destroyed at the end of their retention period? Have you found any institutional demand for such services?

ANYTHING ELSE?

Those are the main topics I'm pursuing, because they touch on some of the areas that represent significant challenges for my own institution, SFU Archives, and I'm hoping to find ideas, tools and solutions that I can adapt to our own situation. But I'm also interested to hear in a more general way how things are with your institution and digital preservation, what you see as your main challenges, where you'd like to see things go in the future.