

Introduction to AtoM and Archivematica



Sara Allain
8 November 2016
slideshare.net/accesstomemory

Today's Agenda

1. Introduction
2. Artefactual and Open Source Development
3. Introduction to AtoM
4. Introduction to Archivematica
5. Questions

Who is Artefactual?

Artefactual Systems is dedicated to producing standards-based open source web applications for digital preservation, description, and access. We are the lead developers of AtoM (for archival description and access) and Archivematica (for managing digital preservation workflows).



Our Team

We are archivists, librarians, system administrators, and developers that are passionate about open-source and standards-based systems. We put out and support several Archivematica and AtoM releases a year and deliver technical services to a growing list of satisfied clients.

artefactual



Evelyn McLellan, MAS
President



Peter Van Garderen, MAS
Founder / Management Consultant



David Juhasz
Director, AtoM Technical Services



Justin Simpson
Director, Archivematica Technical Services



Jesús García Crespo
AtoM Lead Developer



Dan Gilleen, MAS/MLIS
AtoM Program Manager



Sarah Romkey, MAS/MLIS
Archivematica Program Manager



Sara Allain, MI
Systems Archivist



Nick Wilkinson
Project Manager



David Hume
Systems Administrator



Hector Akamine
Systems Administrator



Santiago Rodríguez Collazo
Production Support Engineer (Dev Ops)



Mike Cantelon
Software Developer



Mike Gale
Software Developer



Holly Becker
Software Developer



José Raddaoui Marín
Software Developer



Joel Dunham
Software Developer



Steve Breker
Software Developer



Kerry Campbell
Administrator

Artefactual Systems

and

Open Source Development



Our Team, Our Philosophy, Our Vision

What is Open Source?

Open Source Software (OSS) is computer software with its source code made available with a license in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose.

-- Wikipedia, Oct 13 2016
https://en.wikipedia.org/wiki/Open-source_software

What is Open Source?

1. Free redistribution
2. Source code
3. Allows derived works
4. Maintains author's source code integrity
5. No discrimination against persons or groups
6. No discrimination against fields of endeavor
7. Distribution of license
8. License must not be specific to a product
9. License must not restrict other software
10. License must be technology-neutral

Open Source Initiative



Open Source Definition

<https://opensource.org/osd>

What is Free Software?

A program is free software if the program's users have the four essential freedoms:

1. The freedom to **run the program as you wish, for any purpose** (freedom 0).
2. The freedom to **study how the program works, and change it** so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
3. The freedom to **redistribute copies** so you can help your neighbor (freedom 2).
4. The freedom to **distribute copies of your modified versions to others** (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

Free Software Foundation



Free Software Definition

<https://www.fsf.org/licensing/essays/free-sw.html>

Our Development Priorities

Free and open source </>

Standards-based 

Generalized for broad use 

 artefactual

Our Development Approach

- Standards-based / follows best practices
- Open source / Creative Commons
- Multilingual support whenever possible
- Generalize specific use cases
- Include all features in public release
- Iterative development via multiple contributions over subsequent releases

Community-based
Development

artefactual

Our Business Model

- Maintain our applications under A-GPLv3 licenses
- Provide and maintain the documentation under CC-BY-SA licenses
- Produce additional resources (e.g. videos, presentations, webinars) whenever possible
- Participate actively in the user forums
- Offer additional paid services
- Always include development in public project

The “Bounty Model”
of Open Source Business

artefactual

Our Services

- Hosting
- Remote technical maintenance
- Consultation
- Data migration
- Training
- Application theming
- Software development

<https://www.artefactual.com/services/>

Artefactual Systems is proud to develop free and open software made available under the AGPLv3 open-source software license. We support this software and our user community through release management, public technical and user documentation, and community forum support. To pay the bills, and to continue to develop and update the software, we also offer paid services as outlined below.

These prices effective **January 1, 2015**.

Service	Description	Rates
Software development	Requirements analysis and documentation, architecture and application design, coding, QA, AtoM theming , deployment, technical and user documentation. More info	\$150 per hour fixed fee contracts / \$130 per hour time & materials contracts
Data migration (AtoM)	Get your legacy descriptions into AtoM: data analysis and mapping, migration scripts, test import, QA, production import. More info	\$150 per hour fixed fee contracts / \$130 per hour time & materials contracts
Consulting	Capacity assessment, repository planning, digital preservation and access workflow planning, strategy documents, business cases, project scoping, pilot projects. More info	\$150 per hour fixed fee contracts / \$130 per hour time & materials contracts
Hosting	Full-service packages including remote hosting, data backup, technical support, software upgrades, software patches	AtoM hosting / Archivematica hosting
Installation and technical support	Local Archivematica and/or AtoM installation, technical support, software patches and upgrades	AtoM tech support / Archivematica tech support
Training	Individualized online training for Archivematica and/or AtoM	AtoM training / Archivematica training

The logo for artefactual, featuring a stylized orange 'a' followed by the word 'artefactual' in a dark blue serif font.

Our Applications



Web based application for standards-based description and access in a multilingual, multi-repository environment

<https://www.accesstomemory.org>



Web based application to support digital preservation workflows based on the OAIS reference model

<https://www.archivemata.org>



Your Applications

We  pull requests!

Because the code is open to inspection, any member of the community can fix problems, or develop new features and contribute code back. For any given problem, the community can troubleshoot it together.

DEVELOPMENT RESOURCES

These are pages that have been created to assist developers interested in working with AtoM's code, and sharing that code with the broader AtoM community.

- [Code review process](#)
- [Coding standard](#)
- [Contribute code](#)
- [Functional testing](#)

Seealso

- [Resources/Code repository](#)
- [About the AtoM documentation \(including how to contribute\)](#)
- [Community resources](#)
- [Community development](#)
- [Development philosophy](#)

What is AtoM?

Web-based 

Open source 

Standards-based 

Multilingual 

Multi-repository 

AtoM stands for

Access to Memory

It is a web-based, open source application for standards-based archival description and access in a multilingual, multi-repository environment.



Atom installations



What is Archivematica?

Web- and standards-based open-source application which allows your institution to preserve long-term access to trustworthy, authentic and reliable digital content.

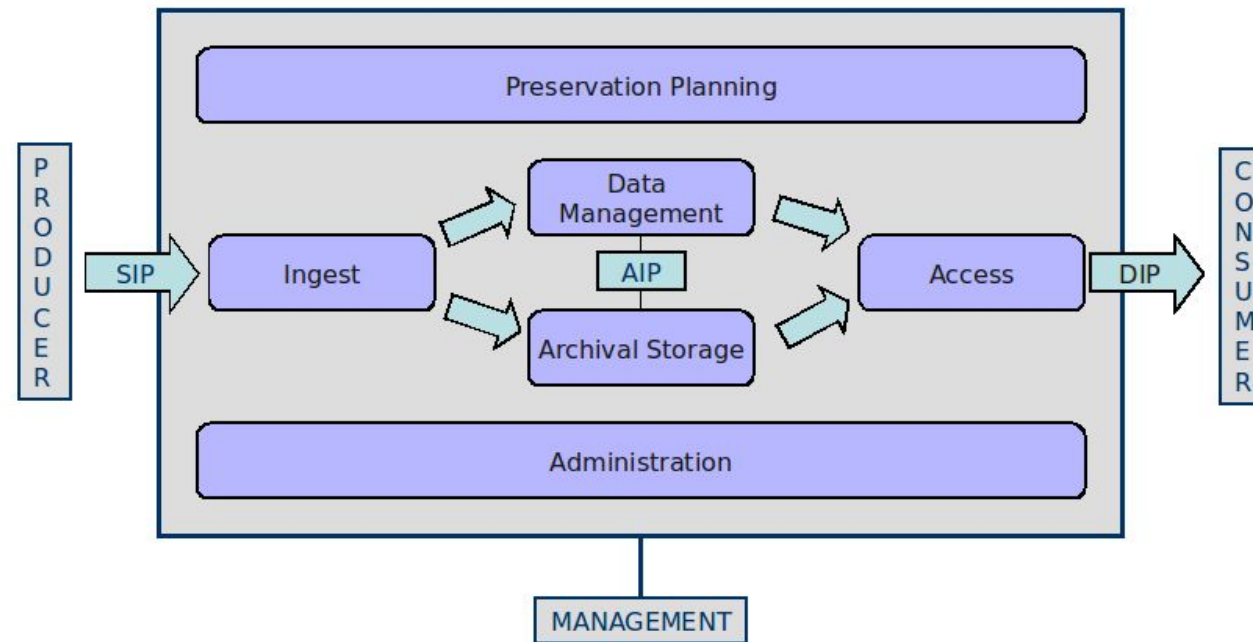
-- Archivematica website, Oct 13 2016

<https://www.archivematica.org/>



OAIS model

Open Archival Information System (OAIS) reference model (ISO-STD 14721)



AtoM Use Cases

ArchivesCanada – Canadian Portal



[HOME](#) [CONTACT US](#) [FRANÇAIS](#) [LOG IN](#)

[ALSO VISIT CANADIAN COUNCIL OF ARCHIVES](#)

Browse by



Archival descriptions



Authority records



Archival institutions



Subjects



Places



Digital objects

ARCHIVESCANAADA.ca *The Gateway to Canada's Past*

ARCHIVESCANAADA.ca is your gateway to resources in archives across Canada:

Through this gateway, search descriptions of archival materials, find digital images, visit virtual exhibits, browse information about archives in every province and territory, and discover the archives with the information you need.

ARCHIVESCANAADA.ca is your national portal to Canada's documentary heritage, found in over 800 archives.

Popular this week

BAnQ - Québec 99 visits

BAnQ - Vieux-Montréal 97 visits

Original: mâle, femelle, veau - Sachez les diffé... 76 visits

Virtual exhibits

Hans S. Dommasch:
University of Saskatchewan

<https://archivescanada.accesstomemory.ca/>

AtoM Use Cases

United Nations – ARMS Archives and Records Management Section

Welcome to the United Nations. It's your world.

عربي 中文 English Français Русский Español



United Nations
Archives and Records Management Section

*Protecting the Present
Preserving for the Future*

[Use UN Archives](#) [Manage UN Records](#) [Resources](#) [Exhibitions](#) [About Us](#)

Browse ▾

Search UN Archives



Browse by

Catalogue

Digital Objects

Popular this week

United Nations Relief and Rehabilitation Administration (UNRRA) (1943-1946) **64 visits**

Organisations Statut der Landesorganisation der Sozialistischen Partei. Oesterreichs **59 visits**

Middle East Relief and Refugee Administration (MERRA)/United Nations Relift and Rehabilitation Agency (UNRRA) - Policy **51 visits**

Status of Forces Agreement (SOFA) and Status of Mission Agreement (SOMA) **46 visits**

International Refugee Organization (IRO) **43 visits**

United Nations Truce Supervision Organization (UNTSO) - Code Cable

Welcome to the United Nations Archives Search Engine

The archives of the United Nations covers four broad areas: the Secretaries-General, Secretariat Departments, Peacekeeping Missions, and Predecessor Organizations. The archives are arranged into Series which fall under larger archival groups (or "Fonds") that are derived from the particular office or agency that created them. The creating agency can be a United Nations department, mission, panel or body, Secretary-General, or other United Nations functional unit. You can do a keyword search (above), or click the links below to browse through the Fonds and Series. Some of our records are digitized, and if so, these items can be viewed online and/or downloaded.

Whether you are a writer or graduate student, genealogist or historian, successful use of archives depends on a carefully planned research strategy. The strategy should allow adequate time for background research, establish which collections hold relevant archives, and include a work schedule which takes into account the extent of the material to be consulted. If you would like to make an appointment to conduct on-site research, please visit our [Contact page](#).

Secretaries-General

- Ban Ki-Moon (South Korea) Term of Office: 2007-present
- Kofi A. Annan (Ghana) Term of Office: 1997-2006
- Boutros Boutros-Ghali (Egypt) Term of Office: 1992-1996
- Javier Pérez de Cuéllar (Peru) Term of Office: 1982-1991
- Kurt Waldheim (Austria) Term of Office: 1972-1981
- U Thant (Myanmar) Term of Office: 1961-1971
- Dag Hammarskjöld (Sweden) Term of Office: 1953-1961
- Trygve Lie (Norway) Term of Office: 1946-1952

Secretariat Departments

- UN Registry (1946-1983)
- Department of Economic and Social Affairs- DESA

<https://search.archives.un.org/>



BROWSE ▾



World Bank Group Archives Holdings



- Archives Holdings Home
- WBG Archives Home
- How to Use Our Site
- About Our Records and Finding Aids
- Request Access to Holdings

Browse by

- Archival descriptions
- Authority records
- Archival institutions
- Digital objects

Popular this week

- Records of President Robert S. Mc...
- Pedro-Pablo Kuczynski files **96 visits**
- Records of the Office of the Presid...
- Records of President Eugene R. Bla...
- World Bank Group Archives **79 visits**

Welcome



<https://archivesholdings.worldbank.org/>

The World Bank Group Archives Reading Room will be closed December 19, 2016 to January 6, 2017 inclusive.

AtoM Use Cases

Beaton Institute Archives

BEATON INSTITUTE

ABOUT US CONTACT PROJECTS REQUESTS



Browse ▾

Search



BROWSE BY

- [Archival descriptions](#)
- [Person/Organization](#)
- [Subjects](#)
- [Places](#)
- [Digital objects](#)

CAPE BRETON
UNIVERSITY

SEARCH THE ARCHIVES



Welcome to the Beaton Institute Digital Archives!

This website provides access to the digital collections of the Beaton Institute, Cape Breton University. The Digital Archives is an online database that contains archival descriptions from the holdings. This website features a only a sampling of the total archival records in our holdings. We will be adding archival descriptions and digital objects to the database. For more information, please [contact us](#) or [visit us in-person](#) to learn more.

To search the Digital Archives, use the simple search box at the top of the page or use the [advanced search](#) option. You can browse the

<https://beatoninstitute.com/>

AtoM Use Cases

Beaton Institute Archives



Browse

Search



PROJECTS



The Beaton Institute has been fortunate to benefit from various annual funding opportunities. These programs allow the Beaton Institute to hire students and contract staff to complete projects dedicated to particular themes or address issues of archival preservation or access. Please return and visit our Projects page on a regular basis to discover new finding aids and digital collections as they become available.

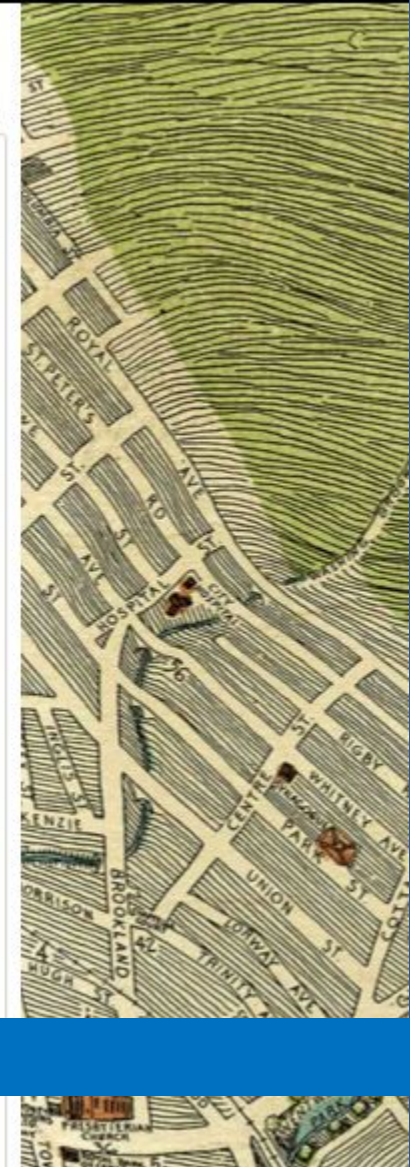
GUIDE TO THE MI'KMAW HOLDINGS

This guide is intended to help researchers locate material about the documentary heritage of the Mi'kmaq which is held within the Archives.

CELTIC MUSIC DIGITAL ARCHIVES

The Beaton Institute, in partnership with the Centre for Cape Breton Studies, has launched the Celtic Music Digital Archives project, which compiles archival resources relating to the Celtic music tradition in Cape Breton Island. Manuscript groups and collections, rare books and limited publications, language, and cultural traditions of Cape Breton Gaels from the nineteenth century to the present. <https://beatoninstitute.com/> the link above to search or browse the holdings.

CAPE BRETON DURING WORLD WAR ONE



AtoM Use Cases

Archives Society of Alberta
Sponsoring Community Resources

archives
SOCIETY OF ALBERTA



[HOME](#) [CONTACT US](#) [NEWS & EVENTS](#) [ONLINE RESOURCES](#) [SITE MAP](#)

ALBERTA
ON RECORD 

Browse ▾

Search



BROWSE BY

→ [Archival descriptions](#)

→ [Digital materials](#)

→ [Archival institutions](#)

→ [Authority records](#)

→ [Subjects](#)

→ [Places](#)

POPULAR THIS WEEK

→ [South Peace Regional Archives](#) 94 visits

→ [Glenbow Archives Posters collection](#) 68 visits

→ [The City of Calgary, Corporate Records, Archives](#) 67 visits

→ [Calgary Normal School](#) 58 visits

Welcome

Welcome to the Archives Society of Alberta's online portal to archival collections in Alberta. **Alberta on Record** gives access to collections preserved in many archives throughout the province. You can search thousands of descriptions of archival records, photographs, and textual records held in Alberta's archives. The database also hosts records from Yukon archival collections.

Use the search box with names or keywords to find particular records or use the browse option to discover the memory and evidence of Alberta.

For access to holdings or for reproduction information, please contact the archival institution that is responsible for the records you are interested in.

<https://albertaonrecord.ca/>

AtoM Use Cases

Archives Society of Alberta
Sponsoring Community Resources



Upload

Sign in

- Home
- Trending
- History

BEST OF YOUTUBE

- Music
- Sports
- Gaming
- Movies
- News
- Live
- Spotlight
- 360° Video

Browse channels

Sign in now to see your channels and recommendations!

Sign in



ArtefactualSystems

Videos

Playlists

Channels

Discussion

About

AtoM CLI Tutorials: Video 1 - Using Vagrant

Access to Memory (AtoM) command-line interface tutorials

ArtefactualSystems • 10 videos • 415 views • Last updated on Apr 8, 2016

Access to Memory (AtoM) is a web-based open source application for standards-based archival description and access. Learn more about the project at: <https://www.accesstomemory.org>.

This series of tutorial videos will introduce AtoM users to some... more

Play all

Share

Save

1



AtoM CLI Tutorials: Video 1 - Installing the AtoM Vagrant Box
by ArtefactualSystems

3:16

2



AtoM CLI Tutorials: Video 2 - Using PuTTY for SSH access (Windows Users)
by ArtefactualSystems

2:04

3



AtoM CLI Tutorials: Video 3 - Vagrant SSH access for Linux and Mac users
by ArtefactualSystems

3:38

4



AtoM CLI Tutorials: Video 4 - Using Debug mode and accessing the webserver error logs
by ArtefactualSystems

9:05

5



AtoM CLI Tutorials: Video 5 - running basic maintenance tasks in the command-line interface
by ArtefactualSystems

9:51

6



AtoM CLI Tutorials: Video 6 - Using the bulk XML import command-line task
by ArtefactualSystems

13:03

<https://www.youtube.com/playlist?list=PLZiwlG5eSMeyeETe15EsEBSu5htPLK-wm>

Archivematica Use Cases

Simon Fraser University

Building a Digital Repository with Archivematica and AtoM

SFU

SFU AtoM

Browse ▾

Search



Your portal to SFU's archival holdings

Browse by

- [Archival descriptions](#)
- [Persons/organizations](#)
- [Repositories](#)
- [Functions](#)
- [Subjects](#)
- [Places](#)
- [Digital objects](#)

Popular this week

- [Course outlines database export](#) **69 visits**
- [Desiderata.pdf](#) **24 visits**
- [Simon Fraser University Archives and Records Management Department](#) **22 visits**
- [Women's movement collection \(Anne Roberts collector\)](#) **19 visits**
- [Mark Winston fonds](#) **17 visits**
- [Pestology Centre](#) **14 visits**
- [Convocation June 2016](#) **13 visits**
- [W.A.C. Bennett fonds](#) **11 visits**
- [Patrick McTaggart-Cowan fonds](#) **11 visits**
- [Apiculture \(beekeeping\) collection](#) **11 visits**

SFU AtoM Home



SFU AtoM (Access to Memory) is a collaborative venture of SFU Archives and SFU Library's Special Collections and Rare Books.

SFU AtoM provides a single interface for searching the archival holdings of both repositories. The database contains descriptions of records existing in many media and formats; where digital copies are available, they are accessible directly from the description. Over time, we will be increasing the digital content available through the site.

To get started, use the search box or select a browse option.

[Search tips](#)

[Copyright policy](#)

Image source:

F-211, Simon Fraser University poster collection

File F-211-0-0-0-1, Campus and event posters

<http://atom.archives.sfu.ca/>

Archivematica Use Cases

Simon Fraser University

Building a Digital Repository with Archivematica and AtoM

SFU

SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

Archives and Records Management

Search

A-Z DIRECTORY

SIGN IN

☒ This site ☐ SFU.ca

HOME

CONTACT US

OUR BLOG: THIS DAY IN SFU HISTORY...

ARCHIVES

RECORDS MANAGEMENT

DIGITAL PRESERVATION

Transferring Digital Records

Technical Overview

Links and Resources

FOIPOP

STAFF RESOURCES

FACULTY RESOURCES

RESEARCHER RESOURCES

DONOR RESOURCES

Digital Preservation at SFU

In 2016, SFU launched its digital repository for archival materials. This enables the Archives and Records Management Department to acquire, preserve and provide access to important digital records created by the university, as well as privately donated digital archival materials.

Digital preservation goes beyond simple storage. It means preserving the ability to access authentic and reliable digital records over time and across changes in computing technology, as the hardware and software environments in which records were originally created become obsolete. There is still much work in front of us, but the Archives and Records Management Department is now positioned to carry its mandate into the digital world of modern records.

UNIVERSITY RECORDS

Digital records of the university are scheduled under [Records Retention Schedule and Disposal Authorities \(RRSDAs\)](#).

- Digital records with an archival disposition (i.e. final disposition = *Selective Retention* or *Full Retention by the Archives*) may be transferred to the digital repository at the end of their total retention period.
- [Contact the Archives and Records Management Department](#)

PRIVATE RECORDS

Links

TRANSFER DIGITAL RECORDS

- Transfer forms and procedures
- Download links for SFU MoveIt, a desktop utility for packaging digital files for transfer

TECHNICAL OVERVIEW

Additional information on the technical infrastructure, standards and architecture of the digital repository.

- Resources supporting best-practices for digital records

<http://www.sfu.ca/archives/digital-repository.html>

HOME

CONTACT US

OUR BLOG: THIS DAY IN SFU HISTORY...

ARCHIVES

RECORDS MANAGEMENT

DIGITAL PRESERVATION

Transferring Digital Records

Technical Overview

Links and Resources

FOIPOP

STAFF RESOURCES

FACULTY RESOURCES

RESEARCHER RESOURCES

DONOR RESOURCES

Technical Overview

SFU Archives' digital repository is built on the **Archivematica** platform, an open-source software application developed by **Artefactual Systems Inc.** Archivematica transforms digital objects transferred to the repository into **OAIS**-compliant Submission Information Packages (SIPs) and processes them through a series of micro-services provided by Archivematica scripts and a suite of integrated, open-source tools bundled in the Archivematica system. Micro-services uncompress all zipped files, assign unique IDs and checksums to each object, run virus checks, extract and record technical metadata, identify file formats, and normalize files (make copies) to preservation and access formats based on rules codified in the Archives' **Format Policy Registry (FRR)**.

At the end of the micro-services "pipeline," Archivematica produces two OAIS-compliant outputs. The Archival Information Package (AIP) contains the original object, plus a copy normalized to the preservation format, plus all the associated metadata wrapped together as a single object using the **METS**, **PREMIS**, and **BagIt** standards. The AIP is sent to archival storage for long-term preservation. In addition, Archivematica outputs a Dissemination Information Package (DIP), containing an access copy plus minimal descriptive metadata. Archivematica sends the DIP to the repository's access system, SFU AtoM, for further description by an archivist, following which it can be made available for public access.

SFU AtoM

SFU AtoM is the public access component of the Archives' digital repository and runs on **AtoM** (Access to Memory), an open-source, web-based application for archival cataloguing that integrates with Archivematica and allows digital materials to be directly linked to their archival descriptions.

SFU AtoM implements the Canadian descriptive standard, the **Rules for Archival Description (RAD)**, and it is shared by both SFU Archives and SFU Library's Special Collections and Rare Books divisions, which maintain their own metadata and holdings information.

What is an archival digital repository?

The Archives' digital repository implements the functional requirements of the Open Archival Information System (OAIS), an ISO standard and reference model. The project is guided by Trusted Digital Repository (TDR) best-practices and professional standards to ensure the long-term accessibility, usability, and authenticity of digital archival records, a vital resource for administrative continuity and planning, legal compliance, and historical research.

System architecture

together hardware, software, VMs, and disk space. Click the image to

<http://www.sfu.ca/archives/digital-repository/dr-overview.html>

Questions?

info@artefactual.com

slideshare.net/accesstomemory

