Introduction to AtoM and Archivematica

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slideshare.net/accesstomemory
1. Introduction
2. Artefactual and Open Source Development
3. Introduction to AtoM
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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).
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 Systems
and
Open Source Development

Our Team, Our Philosophy, Our Vision
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.

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
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

What is Free Software?

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
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
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
Our Services

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

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

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

**atom**
Web based application for standards-based description and access in a multilingual, multi-repository environment
https://www.accesstomemory.org

**archivematica**
Web based application to support digital preservation workflows based on the OAIS reference model
https://www.archivematica.org
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.
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.
So far, this approach has worked, and the AtoM project has a vibrant international community of users. This map shows all the different locales where AtoM has been installed, up to version 2.1 – and these are just the places we know of.

1 pin per installation location; only up to v2.1
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/
AtoM Use Cases

ArchivesCanada – Canadian Portal

Browse by
- Archival descriptions
- Authority records
- Archival institutions
- Subjects
- Places
- Digital objects

ARCHIVESCANADA.ca
The Gateway to Canada's Past
ARCHIVESCANADA.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.

https://archivescanada.accesstomemory.ca/
Welcome to the United Nations Archives Search Engine

The archives of the United Nations cover 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 histonan, 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
- Dag Hammarskjöld (Sweden) Term of Office: 1962-1961

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

https://search.archives.un.org/
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 for, please contact us or visit us in-person to.

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
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'KMAQ 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 publication language, and cultural traditions of Cape Breton Gaels from the nineteenth century to the present can be found at the link above to search or browse the holdings.

CAPE BRETON DURING WORLD WAR ONE

https://beatoninstitute.com/
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.
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

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

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

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

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

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

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

https://www.youtube.com/playlist?list=PLZiwlG5eSMeyeETeI5EsEBSu5htPLK-wm
Archivematica Use Cases

Simon Fraser University
Building a Digital Repository with Archivematica and AtoM

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-211.000-1, Campus and event posters

http://atom.archives.sfu.ca/
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 became 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 for more information.

http://www.sfu.ca/archives/digital-repository.html
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 OAI- 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. Microservices unpack 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 (FPR).

At the end of the micro-services “pipeline,” Archivematica produces two OAI-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 architect, 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 cataloging that integrates with Archivematica and allows digital materials to be directly linked to their archival descriptions.

SFU AtoM implements the Canadian description framework called Rules for Archival Description (RAD), and it is shared by both SFU Archives and SFU Library’s Special Collections and Rare Books division. The relationship between Archivematica and AtoM is tightly linked. Microservices read the AIP, place it in AtoM, and then load it into the AtoM application to make it available to users.

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

The system is designed to be flexible and scalable to address the needs of any repository. The system architecture is composed of highly available, distributed components interconnected over a high-speed network. The core of the system is a set of services that manage the lifecycle of digital assets, from capture to preservation. These services are built around a set of microservices, each responsible for a specific task, such as metadata processing, data storage, and access control. The microservices are built using a combination of languages and technologies, including Python, Java, and Node.js, and are deployed on a cloud-based infrastructure.

Click the image to view the full page.
Questions?

info@artefactual.com

slideshare.net/accesstomemory