Open Access Archives and Repositories

to broaden awareness and understanding of Open Access

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By
Steve Schafer, Director, Library Services
Tony Tin, Head, Digital Initiatives & E-Resources
Colin Elliott, Digitization Specialist

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The Digital Preservation Crisis

“Information is being produced in greater quantities and with greater frequency than at any time in history. Electronic media, especially the Internet, make it possible for almost anyone to become a "publisher." How will society preserve this information and make it available to future generations? How will libraries and other repositories classify this information so that their patrons can find it with the same ease that they can locate a book on a shelf?

The ease with which electronic information can be created and "published" makes much of what is available today, gone tomorrow. Thus there is an urgent need to preserve this information before it is forever lost.”

“A set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.”

Clifford Lynch, ARL Bimonthly Report, No. 226
Growth of Institutional Repositories (IR)

Source: Institutional Archives Registry, 2007
IR – Attributes

- a web-based database (repository) of scholarly material
- institutionally defined (as opposed to a subject-based repository)
- cumulative and perpetual (a collection of record),
- open access and interoperable (e.g. using OAI-compliant software),
- part of the process of scholarly communication (collects, stores and disseminates research info)
Potential Uses

- Scholarly communication
- ePublishing/E-Portfolio
- Curriculum development
- Collection management
- Long-term preservation
- Knowledge management
- Support open access, open source and open standard
AU IR: AUSpace Goal/Objectives

- **History:**
  - Established in 2004

- **Goal:**
  - to address “crisis in scholarly publishing” & preserve AU scholarly materials
  - to actualize AU Open Access Research Policy

- **Objectives:**
  - institutional self-promotion
  - service to faculty in making research papers more widely available
  - opportunity for library staff to connect with research faculty,
  - integrate DSpace with library services
  - encourage **open access**

Url: [http://auspace.athabascau.ca](http://auspace.athabascau.ca)
What is Open Access?

Must satisfy two Conditions

- Free access and license to copy and display in any digital medium
- Scholarly work is deposited into a digital repository
AU Open Access Policy

- Conforms to international standards (Budapest Initiative)
- Publish research concurrently in an open-access format
- Published/unpublished creative works are welcome
- Post previous published works for archive at AUspace
AU Open Access Policy

- Importance of Open Access
  - Unrestricted access to ideas & discoveries
  - Wider distribution to broadest audience
  - Increased citations
  - Long-term access to scholarly articles
  - Gives researchers more control of work
  - Lower cost for production of scholarly work
  - Granting Agencies (CIHR, SSHRC) promote public access
Actualization of AU Open Access

A digital space to promote your scholarly work and open access policy
Technologies: DSpace

- IR platform developed by MIT and Hewlett-Packard
- Open-source Java permits customization and collaboration with other institutions
- Implemented so far by 275 universities and technical libraries
- DSpace Federation:
  - Cambridge, Columbia, Cornell, MIT, ANU, Edinburgh, Calgary, Toronto, and Washington
Technologies

- Modular architecture, well-defined APIs
- 100% open source
  - Programmed in java
  - RDBMS and SQL for metadata
- CNRI “handles” for persistent identifiers
- X.509 certificate-based access control (MIT)
- OAI-PMH for exposing metadata
Information Model

Diagram:
- Community
- Collection
- Item
- Bundle
- Bitstream
- Dublin Core Record
- Bitstream Format
Core Features

- Digital content
- Community-driven & focused
- Institutionally supported
- Durable & permanent
- Accessible content
- Open URI linking
- FAQ Agent
- RSS feed
Core Functionality

- Material submission
- **Metadata** application
- Access control
- **Discovery support** (search)
- **Distribution** (subscribe, new additions)
- **Preservation** (self-archive)
Harvesters

- **Google**
  - Will find you

- OAI (Open Archives Initiative) Protocol for Metadata Harvesting
  - Dublin Core
  - Unique Identifier
  - CARL Harvester (DSpace Search)
  - AU Harvester
Possible AUSpace Content

- Articles
- Technical Reports
- Working Papers
- Conference Papers
- Research Centre Archives
- Lunch and Learn Materials
- Academic Research
- Student Projects
- E-theses

- E-Portfolio
- Images (visual, scientific, etc.)
- Audio/Video files
- Datasets (statistical, geospatial, scientific)
- Databases
- Course materials (archived)
- Learning Objects
- Supplementary Materials
- Digitized library Collections
DSpace does…

- **Captures**
  - Digital research material in any formats directly from creators

- **Describes**
  - Descriptive, technical, rights metadata
  - Assigns persistent identifiers

- **Distributes**
  - Searches metadata
  - Delivers via Web, with necessary access control

- **Preserves**
  - Large-scale, stable, managed long-term storage
Archiving Research

- Choose target collection

Submit: Choose Collection
Select the collection you wish to submit an item to from the list below, then click "Next". (More Help...)

Collection: Research Archive

Next >    Cancel/Save

- Select submission options

Submit: Describe Your Item
Please check the boxes next to the statements that apply to your submission. (More Help...)

- The item has more than one title, e.g. a translated title
- The item has been published or publicly distributed before
- The item consists of more than one file

Next >    Cancel/Save
Archiving Research

- Fill in descriptive metadata

  **Submit: Describe Your Item**

  Enter the names of the authors of this item below.

  - Last name: Smith
  - First name(s) + "Jr": Donald Jr

  Author(s): 

  Enter the main title of the item.

  Title: 

  Enter the series and number assigned to this item by your community.

  Series Name: 
  Report or Paper No.: 

  Series/Report No.: 

  If the item has any identification numbers or codes associated with it, please enter the types and the actual numbers or codes below.

  Identifiers: ISSN: 

  Identifiers: 

- Add keywords, abstract + other info

  **Submit: Describe Your Item**

  Enter appropriate subject keywords or phrases below.

  Subject Keywords: 

  Enter the abstract of the item below.

  Abstract: 
Archiving Research

- Attach files to the submission

- Verify Submission

- Agree to the Licensing
Post-Submission Workflow
Performing Assigned Tasks

On accepting a task from the task pool, a number of options become available.
The Final Product

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td>1997</td>
<td>Machine Assisted Proofs for Generic Semantics to Compiler Transformation Correctness Theorems</td>
<td>Kahn, Saif U</td>
</tr>
<tr>
<td>2004</td>
<td>‘Make Sure They Count Nicely This Time’: The Politics of Election Observing in Zimbabwe</td>
<td>Rich Dorman, Sara</td>
</tr>
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<td>2003</td>
<td>MeCP2 Repression Goes Nonglobal</td>
<td>Klose, Robert; Bird, Adrian</td>
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<td>2002</td>
<td>Mobile Computation with Functions</td>
<td>Kirli, Zeliha D</td>
</tr>
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<td>2002</td>
<td>Model Learning in Iconic Vision</td>
<td>Gomes, Herman M</td>
</tr>
<tr>
<td>2004</td>
<td>Modulation and De-Modulation methodologies</td>
<td>Wilson, Will</td>
</tr>
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<td>2001</td>
<td>Molecular biology - Methylation talk between histones and DNA</td>
<td>Bird, Adrian</td>
</tr>
<tr>
<td>2004</td>
<td>Motivation and Korean Learners</td>
<td>Jose, Sean</td>
</tr>
<tr>
<td>1999</td>
<td>Multiple scattering of classical waves: microscopy, mesoscopy, and diffusion</td>
<td>van Rossum, Mark; Nieuwenhuizen, Th. M.</td>
</tr>
</tbody>
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AUSpace System Overview
Current Status of AUSpace

- In operation for 5 years
- Have interested several centers and faculty in E-publishing, especially for:
  - self archiving
  - E-portfolio
  - Knowledge management
  - Learning objects
- Currently house more 1337 items
- Faculty and researchers to use AUSpace for archiving and open access support
Conclusion

*OA provides significant opportunities for both the author and users.*

OA need not clash with traditional models of scholarly communication and publication.

Authors contribute their works for immediate discovery and access -- for debate, review, scholarship, and usage.

Users have immediate access to the most recently contributed works.
Some References

- **DSpace Federation:**
  www.dspace.org

- **AUSpace**
  http://auspace.athabascau.ca

- **AU Open Access Policy:**
  http://www.athabascau.ca/policy/research/openaccess.html

- **Berlin Declaration:**
  http://oa.mpg.de/openaccess-berlin/berlindeclaration.html

- **Budapest Open Access Initiative:**
  http://www.soros.org/openaccess.

- **CIHR Open Access to Health Research Publications:**
  **CIHR Unveils New Policy**
  http://www.cihr-irsc.gc.ca/e/34851.html
Some References

  http://ir.lib.sfu.ca/handle/1892/97

- SSHRC Policy Focus-Open Access
  http://www.sshrc.ca/web/about/policy_focus/open_access/index_e.asp
For Further Information

OPEN ACCESS WEEK

October 19-23, 2009

http://openaccess.athabascau.ca