Promoting 21st Century Scholarly Communication: The Role of Institutional Repositories in the Open Access Movement

University of Hong Kong, May 17-18, 2007

Case Studies of the Integration of Institutional Repositories and Open Access journals

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# Overview

- Changing landscape of scholarly communication
- Open Access and Public Policy
- International and Canadian context
- IR and what it is
- The multiple uses of IR
- Benefits



# Changing landscape of scholarly communication

- Print to electronic, retro-digitization etc.
- Access online resources from the desktop
- Open Access
- Google is king?

But Price and Permission Barriers are still significant

# What authors need

- Support for new modes of authorship and dissemination
- Data base storage
- Media integration
- Long term archiving
- Linking research and teaching
- Support for alternative forms of evaluation and reward

# **Problems**

- Researchers/Authors: their work are not as widely disseminated -> lost of research impact
- Researchers/Readers: unable to build on prior research because of the fragmented nature of the literature
- Libraries unable to provide users with their needs
- Universities poor stewardship of their faculty's intellectual output
- Funders not sure what they have funded and the return on investment

# These problems are particularly acute in developing countries



# Opportunities created through Open Access

- Integrate knowledge from diverse geographic locations and sources
- Infrastructure for an expanded view of scholarly communication
- New services and business models
- Implementation of Semantic Web technologies

- ❖ Emergence of E-Science (UK), E-Research (Australia), Cyberinfrastructure (US)
  - ❖Large scale data, computing intensive analysis, networked communication

Not just for the sciences, but also for the humanities and social sciences



Great opportunity for developing countries to participate in global knowledge exchange



# International Support

- BOAI, February 2002
- Bethesda Statement, April 2003
- Berlin Declaration, October 2003 & May 2004, February 2005, March 2006
- Wellcome Trust, October 2003, May 2005
- UK Parliamentary Inquiry, 2004
- Ukrainian Cabinet of Ministers, 2005
- Research Councils UK, 2006
- Academy of Sciences of South Africa, 2006
- US Public Access to Federally Funded Research Act of 2006 (to be re-introduced in 2007)
- European Commission Communiqué, 2007



### A Vision Of The Future

# What Would A 21st Century Research Communication System Look Like?

Goal: Maximizing the impact of research knowledge for society

Realized By: Providing pathways (through individual & institutional connections) for the rapid circulation, effective management & preservation of data, information & knowledge

#### **Guiding Principles:**

- All nations should have the capacity to access & contribute to the vitality of the system
- Open access to data, information & knowledge



Office of the National Science Advisor

Bureau du Conseiller national des sciences



Arthur J. Carty
National Science Advisor to the Prime Minister
International Association of Technological University Libraries, Quebec 31 May 2005

# Canada's responses

- Canadian Institute of Health Research (CIHR)
- Social Science and Humanities Research Council of Canada (SSHRC)
- Canadian Federation for the Humanities and Social Sciences (CFHSS)
- Canadian Association of Research Libraries (CARL)
- National Research Council (NRC)?
- Natural Sciences and Engineering Research Council of Canada (NSHRC)?

# How to achieve OA

- Open Access Journals
  - Different funding models
- Open Access Repositories
  - Author self-archiving in:
    - Institutional
    - Subject-base
    - Centralized repositories

# Institutional Repositories are

- Institution-based
- Capture and make accessible an organization's intellectual output
- A set of scholarly communication services
- Cumulative & perpetual
- Should be technically open & interoperable (e.g. OAI)



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#### Featured Author



Rudy Boonstra Professor of Physiology and Zoology

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# Different use of IR

# Examples

- Supporting Local Journal
  - Women's Health and Urban Life
- Supporting International Journal
  - Archiving of Bioline International
  - Archive defunct journal
- Enabling Digital Scholarship
  - New forms of publications
- Community building- beyond institutions
- Data warehousing
- Teaching resources, Multimedia objects

# Researchers post-publication needs

- A place to archive their work
- Data storage and linking
- Permanent identifier for digital content
- Metadata creation
- Aggregation of content discipline?
- Navigation and discovery tools
- Usage, citation and impact analysis tools



















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Authors: Krebs. Charles

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Turkington, R.

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Citation: Science Vol. 269

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C Krebs, S Boutin, R Boonstra, ARE Sinclair, JNM ... - Science, 1995 - hdl.handle.net

Snowshoe hare populations in the boreal forests of North America go through 10-year cycles. Supplemental food and mammalian predator abundance were ...

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Common dynamic structure of Canada lynx populations within three climatic regions - group of

KS Chan, H Tong, R Boonstra, S Boutin, CJ Krebs, ... - Science, 1999 - zi,ku,dk 25. SL Pimm, The Balance of Nature? (Univ. of Chicago Press, Chicago, IL, 1991). 26. WSC Gurney and RM Nisbet, Ecological Dynam- ics (Oxford Univ. Press. ...

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The utility of Ki-67 and BrdU as proliferative markers of adult neurogenesis - group of 10 »

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Population Changes of the Vertebrate Community During a Snewshee Hara Cycle in Canada

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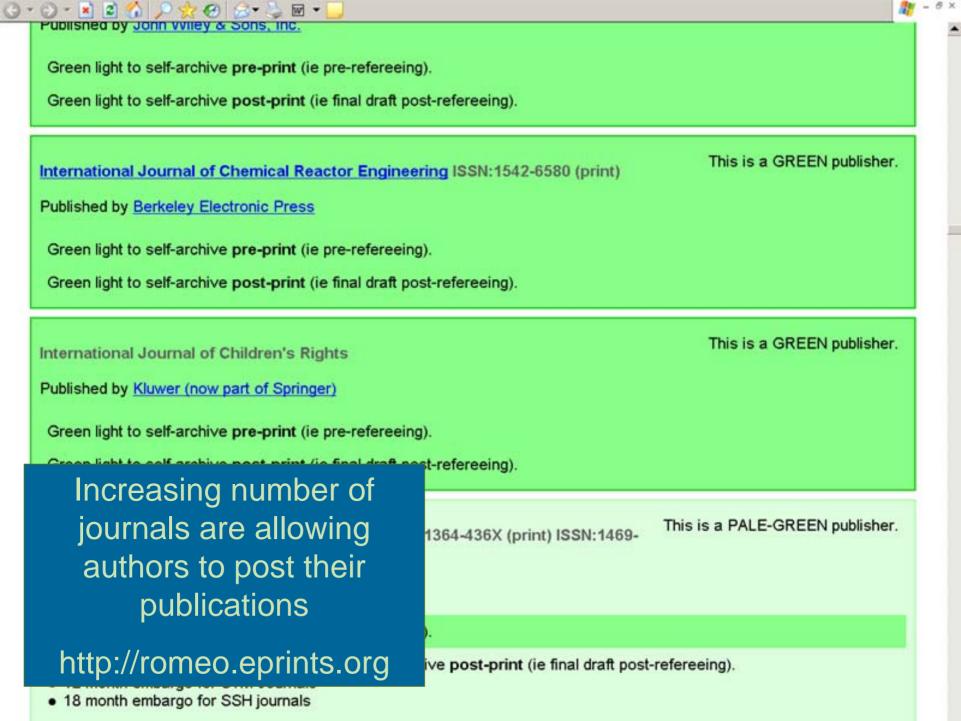
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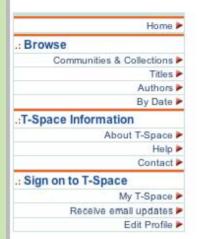








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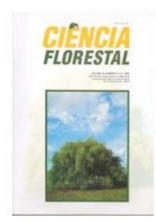
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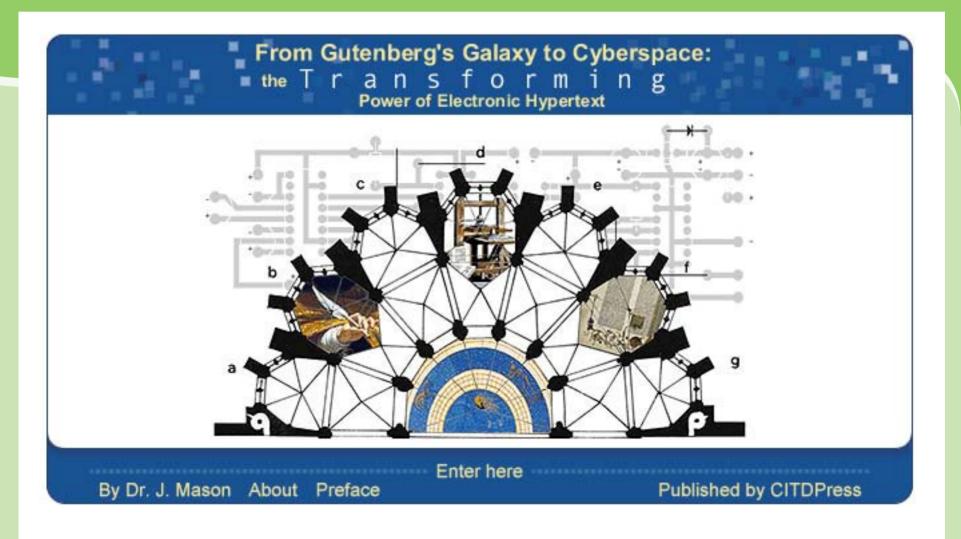
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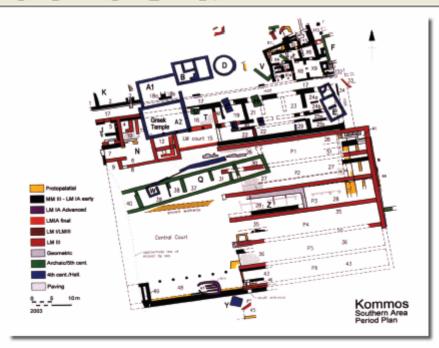
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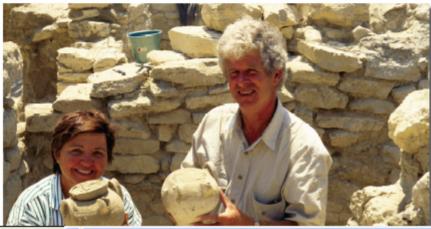


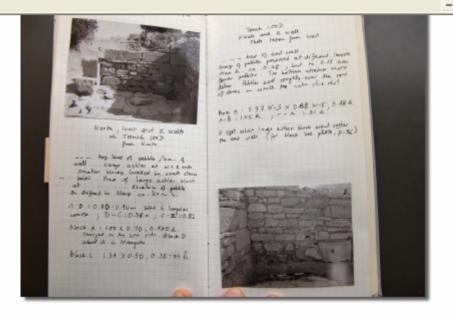
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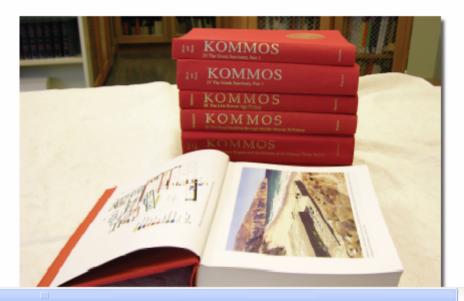


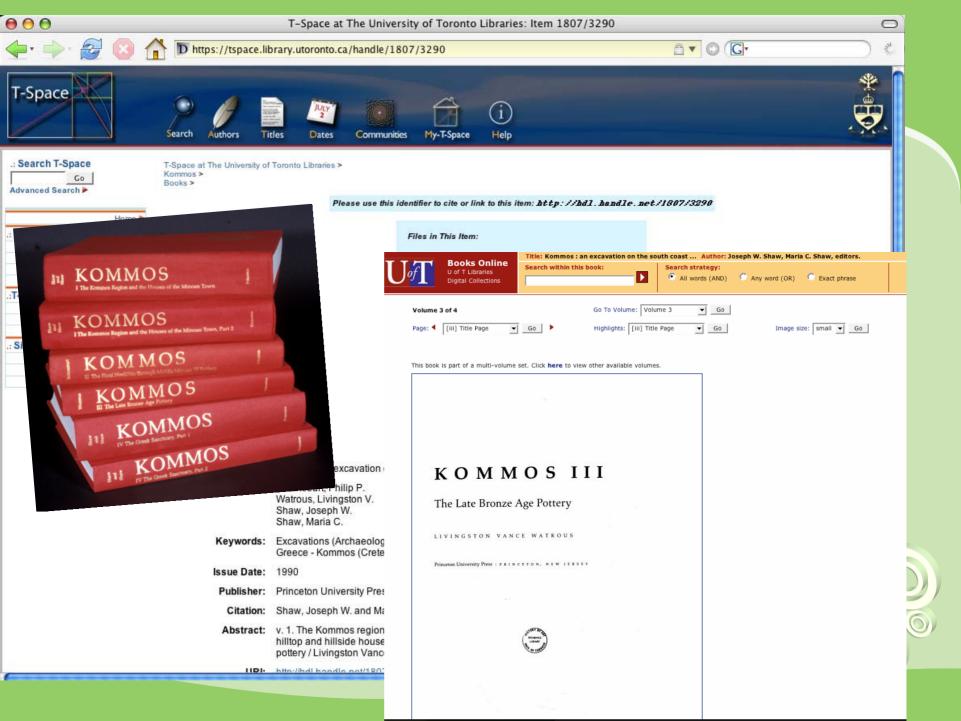
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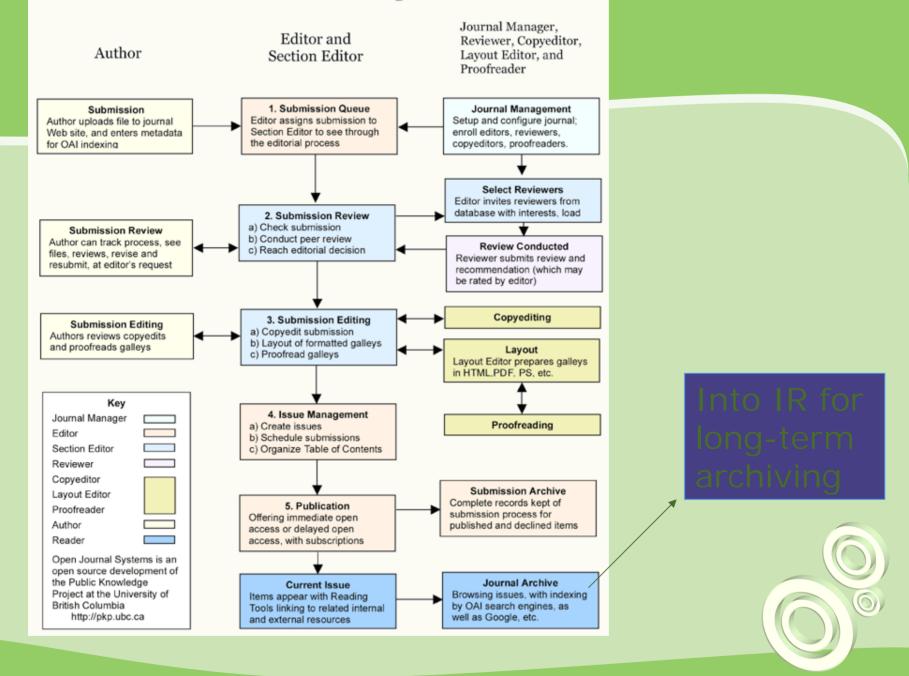
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- Greater control of one's intellectual labour
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- For University
  - Promote institutional prestige
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#### For Libraries

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#### For funders

- -Ensure public access
- -Better return on investment when research is built upon

# Conclusions

- Time to act now
- More research on researchers needed
- Both bottom-up (faculty-driven) and top-down (university and funding mandates) are needed
- Development of new tools for evaluation and quality assurance
- Think globally and act locally

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