Overview of Open Access and Public Commons Initiatives in the United States

Professor Harlan J. Onsrud
Spatial Information Science and Engineering
University of Maine

Global Perspective:

Gross National Income Per Capita

U.S. - $34,100

1. High National Income Per Capita ($9,266 or more)
   - 50 countries
2. Upper Middle Income Per Capita ($2,996 to $9,265)
   – 39 countries
3. Lower Middle Income Per Capita ($756 to $2,995)
   – 51 countries
4. Low National Income Per Capita ($755 or less)
   – 65 countries

Illustrative Open Access and Public Commons Projects

1. Open Source Software
2. Open Access Journal & Article Initiatives
3. Disciplinary and Institutional Depositories
4. Search Engine Approaches
5. General Public Commons Initiatives

1. Open Source Software

OpenOffice <www.openoffice.org>

- probably the current "best of" free office suite product for personal user
  - word processing
  - drawing tools
  - presentation
  - bibliography database
  - spread sheet
  - equation editor
- free to download
- uses Linux
- readily available for most platforms

2. Journal & Article Open Access Initiatives

PubMed Central

- life sciences journal literature
- free and unrestricted
- small proportion of journals to which U.S. National Library of Medicine subscribes allow open access after delay

Public Library of Science

- lifesciences and medicine
- new journals forthcoming in biology & medicine

funding: philanthropy ($9 million Moore Foundation) plus author charges ($1500 per article)

Professional Member Organizations

- support of peer reviewed publications through dues

SPARC Journals (Scholarly Publishing and Academic Resources Coalition)

funding: academic library support of open access competitors of high cost journals

3. Disciplinary & Institutional Open Access Depositories

Electronic pre-print approach

- avoid copyright issues by openly archiving an electronic copy prior to submission to the private publisher
- often self archiving by author in automated process

Typical: establish **Open Access Initiative compliant** depositories using open-source software

Eprints (Southampton University)
http://eprints.org/

Dspace (MIT)
http://dspace.org/technology/functionality.html

CDSWare (CERN)
http://cdsware.cern.ch/

depository funding: disciplinary institution or
home institution of researcher
- set up & maintenance costs minimal

Disciplinary Approach Example:

ArXiv preprints (Los Alamos/Cornell)
- physics, mathematics, nonlinear sciences,
computer science

Institutional Approach Example:

About 66 organizations, mostly universities, are running Eprints self-archiving software capability for all disciplines at their entire institution

MIT preprint collections at https://hpds1.mit.edu/index.jsp

Drawbacks of the electronic pre-print approach?

- half of a solution

- after peer review need to update metadata, add an addendum for changes, and still don't have the article in the form you want others to read

4. Search Engine Approaches

CiteSeer

- crawls the web and also accepts url submissions
- software free for non-profits
- > 5 million distinct citations within the computer science literature
- > 500,000 full-text on-line articles

Legal Problem - How can it be legal to copy the full text of a half million articles without asking anyone for permission to do so? …. DMCA

5. General Public Commons Initiatives

Creative Commons licensing approach
- potentially applies to all forms of works
<http://www.creativecommons.org>

✓ **Attribution.** Permit others to copy, distribute, display and perform the work and derivative works based upon it only if they give you credit.

___ **Noncommercial**.

___ **No Derivative Works.**

✓ **Share Alike/Copyleft.** Permit others to distribute derivative works only under a license identical to the license that governs your work.

Drawbacks of Creative Commons approach?

1. currently applies only to the web
2. finding files licensed under cc currently difficult
   - lack of critical mass of contributions to date
   - Google search?

Ideal Operational Environment for Accessing Scientific Literature and Research Data across the Globe

- ability to cite across any and all scholarly domains and link from any citation we find on the web to the full article or dataset on the open web

The Secret to Open Access (Peter Suber):

keep control in the hands of those who most want open access …. the authoring scholars

Incentives:
Affecting the decision-making of individual scholars

funding agency policies - encourage researchers to report in their grant applications only those articles and data sets that are in open access archives

promotion and tenure policies - peer reviewed data sets and articles placed in open archives are more valuable to society and therefore should be recognized as such

university IP policies - encourage professors to use open access licenses and give them full authority to use for their IP

Bottom Line:

If the reward system for scholars is restructured and online facilities are made easy, would individual scholars across the globe make use of open access methods and archives to make their works available for sharing with others?

Hypothesis: majority would

…. a globally distributed and networked skill set will loosen the grip of the richest countries on innovation

Bruce Kogut and Anca Metiu, Distributed Knowledge and the Global Organization of Software Development
http://opensource.mit.edu/papers/kogut1.pdf