Collaboration of Scholarly Communication - Advancing libraries in Japan

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General Manager
National Institute for Materials Science Library

About myself
- University librarian
- Society Publisher
- Director of Library + Publisher
- Library management
- Publishing open access journal
- Science and Technology of Advanced Materials (IF 2.599)
- Web portals for scholarly communication

About NIMS
1. Government-funded research laboratory
2. 5 campuses, Japan
3. 2 satellites, Seattle and Cambridge
4. Researchers 500 / 1500 (non-Japanese 9%)
5. Budget ¥22 billion (Library 0.8%)
6. 33 research labs and centers
7. 4 joint graduate university programs
8. Research collaboration centers between industrials; TOYOTA (日), Leica (日), Rolls Royce (英), San Goban (仏)
1. Advancing library networking and collaboration
   - Library Associations, Consortia, Education
   - Digital Repository Federation, DRF – a virtual collaboration network between librarians and researchers
2. Library collaboration in Japan and around the globe
   - Digital archiving
   - Scholarly communication
3. Open Access
4. Scientists – scholarly communication in digital world
5. Digital Library, NIMS eSciDoc: researchers-oriented infrastructure
6. Role of librarians and beyond in digital era
   - Librarians as information strategists
   - Librarians’ visions for the future

<table>
<thead>
<tr>
<th>University Libraries</th>
<th>Natl Res Inst Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Students</td>
<td>606,147</td>
</tr>
<tr>
<td>No of Faculties</td>
<td>61,246</td>
</tr>
<tr>
<td>Library Materials Expenditures</td>
<td>$59,249,840</td>
</tr>
<tr>
<td>(ave / inst)</td>
<td>$688,950</td>
</tr>
<tr>
<td>(ave / person)</td>
<td>$89</td>
</tr>
<tr>
<td>Number of Librarians</td>
<td>1808</td>
</tr>
<tr>
<td>(ave / inst)</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Makoto Nakamoto, Administrative Director, Waseda University, 2010 Nov

3 million users/761 organizations => $288 million
- Research-oriented management
- Decreasing library budget
  - Decreasing total library budget at -5% - 10%
- No 'professional' librarians
  - 45 – 430 researchers / library staff
- Self-lending library
  - Requirements of 24 hours use, e-resources, screening interface

### A new consortium has just been established.

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<thead>
<tr>
<th>University Libraries</th>
<th>Natl Res Inst Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Univ. (91)</td>
<td>Japan Association of National University Libraries</td>
</tr>
<tr>
<td>Public Univ. (79)</td>
<td>Council of Public University Libraries</td>
</tr>
<tr>
<td>Private Univ. (520)</td>
<td>Japan Association of Private University Libraries</td>
</tr>
</tbody>
</table>

- Established: 1967
- 1995
- 1938
- 2008

<table>
<thead>
<tr>
<th>E-Journal Consortia</th>
<th>Members</th>
<th>Publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUL</td>
<td>24</td>
<td>29</td>
</tr>
<tr>
<td>PULC</td>
<td>91</td>
<td>55</td>
</tr>
<tr>
<td>- Consortium</td>
<td>374</td>
<td>165</td>
</tr>
<tr>
<td>- Members</td>
<td>55</td>
<td>318</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Collaboration among research institutes funded by the Japanese government</td>
<td></td>
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</table>

Source: Makoto Nakamoto, Administrative Director, Waseda University, 2010 Nov

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**Statement of Japan Science Council, 2010**

- Recognition by scientists; scholarly journal publishing
- Need to be fostered on a global scale.
1. Advancing library networking and collaboration
- Library Consortia and the future
  - Shared licensing for E-Journals (Big Deal)
  - Negotiators (volunteers -> professional)
  - Know-how on communicating with publishers
  - Documentation for the public
  - Lobbying library users/organizations/governments
  - Information exchanges between consortia on the web
  - Restructuring or establishing new consortia that libraries, regardless of type, can choose to meet their needs.
  - Publishing library/Librarian voices (see example)
1. Advancing library networking and collaboration

- **Digital Repository Federation, DRF**
  - A virtual collaboration network between librarians and researchers
  - Launched 2008, Hosted: Hokkaido Univ., Japan
  - **Mission:**
    - Open discussion for sharing experiences and expertise
    - Conferences and workshops
  - **Research and Development**
    - Developing access path to institutional resources via OpenURL-compliant service systems including link resolvers, AIRway
    - **Society Copyright Policies**, aiming to develop legal protocols for managing copyright issues in an open access environment in Japan.

2. Library collaborations in Japan and around the globe

- **Digital Archiving and Collaboration**
  - **Digital Repository Federation**
    - Digital Repository Infrastructure Vision for European Research “DRIVER”, 2008
    - Confederation of Open Access Repositories “COAR”, 2009
    - To enhance greater visibility and application of research output through global networks of Open Access digital repositories.

  - **National Diet Library**
    - China-Japan-Korea Digital Library Initiative “CJKDLI”
    - To provide scholars with easy access to multicultural and multilanguage contents on the internet.

  - **National Institute of Informatics**
    - International Scholarly Communication Initiative “SPARC Japan”
    - A project to strengthen and promote the electronic journals of Japan’s academic societies.
2. Library collaborations in Japan and around the globe

- Scholarly communication

- SPARC Japan – strengthen publishing ability
  - Launched 2003, by the Ministry of Education, Culture, Sports, Science and Technology
  - Supports 32 organizations, 45 journals
  - Events: 20 seminars and workshops a year
  - Promoting academic societies and communications between libraries.

3. Open Access

- IRs: Institutional Repositories

  - Worldwide Understanding
    - An online database which collects and preserves in digital form.
  - Objectives
    - To provide open access to institutional research output and educational materials; articles, textbooks, podcasts etc.
    - To store in digital form for long-term preservation.
  - Practices in Japan
    - Serve as an institutional showcase
    - Assist scholarly communications
      - Self-archiving and self-promotion
      - Store human knowledge for future generations.
    - Provide a new role for libraries: promoters, publishers

3. Open Access

- IRs: Institutional Repositories

  - Policy of repository and open access
  - Universities
    - Example: Tsukuba university
      - University staff and students
      - Research output and published articles, dissertations, private communications.
      - Library investigates copyright, and potential damage to other parties, by making IR contents open-access.
  - Research Institutes
    - Example: National Institute for Materials Science
      - Staff, researchers, engineers and others
      - Research materials including papers, reports, presentations, research data, image files.
      - Depositors are responsible for making materials open-access.
3. Open Access
- IRs in various forms at Research Institutes

Marine-Earth Science
- Radio Logical Science

Aerospace Science
- JAXA Digital Archives

Materials Science
- NIMS Digital Library

3. Open Access
- Governmental support for IRs and digital archives

Japanese publications
- CiNii
- ReAD

Repository services
- J-STAGE
- JAIRO

Japanese researchers
- RIKEN
- RIKEN
- RIKEN

3. Open Access
- Growth of IRs/digital archives around the world
3. Open Access

- **Open Access Journals: what/how?**
  - Open access is the idea of making original research articles freely accessible;
  - **Scholars** expect a wider readership and greater attention from their colleagues in their community.
  - **Publishers** expect to make open access a sustainable business model. What or who pays?
  - **Societies** expect academics to provide support for open-access.
    - *For example:* SCOAP3 in high energy physics
  - **Libraries** expect open-access to replace the subscription model.
    - However, no successful cases have yet been reported.

- **Open Access Journals**
  - **Practice in Japan**
    - J-Stage 590 titles (2010 Feb)
      - English 207 (44%)
      - Japanese 37 (37%)
      - Eng + Jpn 260 (19%)
    - Business model
      - *Free access 454 (77%)*
      - *Others 136 (23%)*
    - subscription, partially free, free to members etc.
    - *Author-paid OA*
      - • **Physics 8.5%**
      - • **Chemistry 1.0%**
      - for full papers in 2008

- **Open Access Journal in materials science**
  - *Science and Technology of Advanced Materials,*
    - published by National Institute for Materials Science (NIMS)
    - **Profile**
      - 10th anniversary in 2010
      - IF 2.599, 60 papers/yr, 3 staff
      - International Editorial Board and reviewers
    - **Criteria- “few” but “must read”**
      - Papers must meet our well defined high standards of quality, and are expected to be of interest for not only for specialists but also for readers in interdisciplinary fields.
    - Transforming to “Free to submit”, “Free to read”
    - **Author-friendly copyright, Creative Commons Attribution-Non-Commercial-ShareAlike 2.5 license.**

- **e-Research Environments**
  - Scholarly communication is changing; requirement of innovative science, multidisciplinary area, external funding....
4. Scientists
- e-Research Environments

The top 10 journal articles published in 2003 by

A survey for NIMS researchers, “What does e-Research mean to you?”

When do you need to share and disseminate your research?
× not at the primary stage of the research cycle
○ preprint stage, perhaps
○ published papers, definitely + maybe supplementary materials
○ find audience: who? / where? / how many? / for which paper(s)?

Digital library towards e-Research environment:
• a secured storage, standard xml-web-based database
• with simple user interface
• that allows self-archiving of various items
• with an access management (myself / NIMS only / OA)
• and a visualized log view for researchers
• by using standard protocol (OAI-PMH).

5. Digital Library
- NIMS eSciDoc

Roles of NIMS eSciDoc: (i) digital library, (ii) self archiving platform, as well as (iii) institutional repository, in collaboration with the Max Planck Digital Library.

Repository as a self-archive and self-promotion system
• flexibility of xml schema depending on research fields and data sets
• easily manageable interface
• secured and sustainable repository server
• visualized access logs

Repository as a knowledgebase
• Interlinking of research outputs
  preprints ⇔ published articles ⇔ data sets ⇔ translations
  ⇔ research reports ⇔ …

NIMS Digital Library project –phase 1
5. Digital Library
- NIMS eSciDoc >> SAMURAI

6. Role of libraries and beyond in digital era
- Librarians, as information strategists

- Stakeholders of scholarly communications
  - Researchers, students
  - Institutes, governments as funders

- Rich information in library can
  - Be designed effectively
  - Be customized for stakeholders
  - Provide new and innovative library services
    - For example...

By Dr. Komei Halada
(New materials for environmental science)
6. Role of libraries and beyond in digital era

- Librarians' visions for the future

- Librarians towards e-Research environment
  - Awareness of new role of librarians
  - Librarians need to understand e-Research environments.
  - Work mainly offstage, but also need to appear onstage to provide leadership for the e-Research community.

- Library service has completely changed since the beginning of the digital era, librarians may

  - Design unique services,
  - By working together with researchers
  - By collaborating with libraries worldwide
  - By employing standard data-transfer-protocols and metadata schema in library contents.
Future of eBooks in libraries?

Future of open access publishing in libraries?

オープンジャーナルシステム (Open Journal Systems)

Thank you

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