Institutional Repository in Japan

“Standing on the Shoulders of Digital Giants”

International Symposium on Institutional Repositories, e-Science and the Future of Scholarly Communication

Session 3: The Challenge of Digital Resources for Higher Education

Yoshito Itoh
(Director of the Nagoya Univ. Library)
No university with no institutional repository can bear social accountability
An institutional repository will be “must-have” like a university website today
Outline

1. The present of institutional repositories in Japan
   ◆ Governmental policy on scholarly information infrastructure
   ◆ Activities of university libraries
   ◆ Cyberscience infrastructure

2. Current situation of NAGOYA Repository
   ◆ Place within Nagoya University
   ◆ Collaboration with in-campus organizations
   ◆ Marketing activities and problems
   ◆ Researcher Community
   ◆ Interuniversity collaboration
On enhancement of infrastructure for scholarly information (Summary)

Improvement of dissemination of scholarly information functionality of universities

Urgent need for mechanism of systematically dissemination scholarly information with a view to directly get university’s research results to the population
Policies for scholarly information infrastructure

Future developments for scholarly information infrastructure (Report)

Promotion of institutional repositories and scholarly dissemination from universities

Universities as the most resourceful research institutions must put stress on active dissemination of their research results in respect of both enhancing research and education activities and improving scholarly communication and contribution to society.
Future developments for scholarly communication (4) Approaches to open access

Promote institutional repositories in research oriented institutions as new means of scholarly communication shall be encouraged in collaboration with scholarly societies in view of strengthening not only better scholarly dissemination but improved institutional repository
Science and Technology Basic Plan, 3rd Term

March 28 2006  Cabinet approval

Governmental policy on scholarly information infrastructure

Improvement of research information Infrastructure

Encourage digital archiving of scholarly journals for disseminating of research information as assets of the country.

Disirably, articles published for the purpose of making research from public funding public must be available on line for free after a certain embargo period.
Activities of university libraries 1

- New trends of digital libraries
  - interface among information sources and users with a high additional value
    WG of committee on advanced information libraries, JANUL (May 2003)
- Enhancement of dissemination of in-campus information via institutional repositories
  - Institutional repositories are to be implemented mainly in university libraries in order to strengthen the information dissemination function of universities
Activities of university libraries 2

- An implementation of institutional repository software
  - June 2004-March 2005 (NII)
  - Purpose
    Accumulate experiences on implementation and operation of IR via research on existing institutional repositories and experimental operation of IR software
- 6 Partners
  Hokkaido University, Chiba University, Tokyo University, Tokyo Gakugei University, Nagoya University, and Kyushu University
Next generation content infrastructure

Dissemination

CSI (Cyber Science Infrastructure)

Network + Contents + research alliance

Social contribution
Scholarly community
International contribution

Assurance

Joint introduction of library consortium and NII
Digitization
Crawling
Harvesting

Academic publishers
Academic societies
Web
Media

Scholarly contents

Digital repositories

Accumulation of achievements
Activation

Collaboration

Universities

Academic activities

Book and journal
Articles
Dissertation
Project reports
Educational material
Patent
Software
Scientific DB
Cultural asset DB etc

partnership

NII

NII-REO
NII-ELS
KAKEN
CAT

Springer, OUP etc
Journal articles
Reports of Grant-in-aid research
Book and journal Indices

Next generation content infrastructure
Commissioned project 2005

- Partners selected on the basis of past achievements and concrete planning concerning institutional repositories

- Partners (19 universities)
  - Hokkaido, Tohoku, Tsukuba, Chiba, Tokyo, TIT, Tokyo Gakugei, Kanazawa, Nagoya, Kyoto, Osaka, okayama, Hiroshima, Yamaguchi, Kyushu, Kumamoto, Nagasaki, Waseda, Keio
Project extended (2006)

- **Basic concepts**
  - Two goals
    - Nationwide promotion of institutional repositories
    - Innovative research and development
  - Two areas of operation
    - Area 1 (Implementation and operation of institutional repositories)
    - Area 2 (Innovative research and development)
- Result of selection process
  - 57 universities are accepted
  - 22 R&D projects approved
Repositories in Japan

- 23 repositories are working (as of December 12)
- [http://www.nii.ac.jp/irp/info/list.html](http://www.nii.ac.jp/irp/info/list.html)
- Hokkaido, Tsukuba, Tokyo, Tokyo Gakugei, Chiba, Nagoya, Mie, Kanazawa, Kyoto, Osaka, Kobe, Okayama, Hiroshima, Yamaguchi, Kyushu, Nagasaki, Kumamoto, Keio, Waseda, Kanto Gakuin, Ritsumeikan APU, Okinawa Kokusai, JETRO
Activities in Nagoya University
## Current situation of NAGOYA Repository

### Contents

<table>
<thead>
<tr>
<th>Content</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal articles</td>
<td>388</td>
</tr>
<tr>
<td>Theses and dissertations</td>
<td>317</td>
</tr>
<tr>
<td>Bulletin articles</td>
<td>3,477</td>
</tr>
<tr>
<td>Special collections</td>
<td>29,889</td>
</tr>
<tr>
<td>Books</td>
<td>9</td>
</tr>
<tr>
<td>Conference materials</td>
<td>52</td>
</tr>
<tr>
<td>Learning materials</td>
<td>49</td>
</tr>
<tr>
<td>Web resources</td>
<td>1,937</td>
</tr>
</tbody>
</table>

*As of Dec 7 2006*
Usage: NAGOYA Repository

- **Visits**
  
  (10/1/2006-11/30/2006)

  **Average 161/day**

  **max 294  min .75**
Usage: NAGOYA Repository

- Page views
  (10/1/2006-11/30/2006)

Average 596/day
max: 1,712 min: 142

10/24(Tue) 1,712
11/18(sat) 142
Usage: NAGOYA Repository

- Geo Map Overlay

Access from worldwide
Usage: NAGOYA Repository

- Referring source
  (10/1/2006-11/30/2006)

70% from Google or Yahoo

- Google 51.54%
- Yahoo 17.77%
## Usage: NAGOYA Repository

### # of downloads (Feb-Nov 2006)

<table>
<thead>
<tr>
<th></th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal articles</td>
<td>82</td>
<td>150</td>
<td>269</td>
<td>421</td>
<td>416</td>
<td>524</td>
<td>838</td>
<td>806</td>
<td>1,224</td>
<td>2,363</td>
<td>7,093</td>
</tr>
<tr>
<td>Theses</td>
<td>3</td>
<td>97</td>
<td>143</td>
<td>430</td>
<td>3,583</td>
<td>4,838</td>
<td>3,387</td>
<td>3,838</td>
<td>5,148</td>
<td>7,532</td>
<td>28,999</td>
</tr>
<tr>
<td>Bulletin articles</td>
<td>147</td>
<td>1,496</td>
<td>5,196</td>
<td>8,638</td>
<td>9,985</td>
<td>5,586</td>
<td>4,782</td>
<td>6,683</td>
<td>7,039</td>
<td>12,422</td>
<td>61,974</td>
</tr>
<tr>
<td>Learning materials</td>
<td>9</td>
<td>94</td>
<td>174</td>
<td>646</td>
<td>1,266</td>
<td>1,934</td>
<td>1,683</td>
<td>1,512</td>
<td>1,867</td>
<td>3,071</td>
<td>12,256</td>
</tr>
<tr>
<td>Misc.</td>
<td>58</td>
<td>96</td>
<td>159</td>
<td>295</td>
<td>333</td>
<td>277</td>
<td>407</td>
<td>409</td>
<td>481</td>
<td>782</td>
<td>3,297</td>
</tr>
<tr>
<td>Total</td>
<td>299</td>
<td>1,933</td>
<td>5,941</td>
<td>10,430</td>
<td>15,583</td>
<td>13,159</td>
<td>11,097</td>
<td>13,248</td>
<td>15,759</td>
<td>26,170</td>
<td>113,619</td>
</tr>
</tbody>
</table>

Total 113,619
Usage: NAGOYA Repository

◆ # of downloads
(Feb-Nov 2006)

Nov 2006
26,170

Misc.
Learning material
Bulletin articles
Thesis
Journal articles
Usage: NAGOYA Repository

summary

- 160 person, 600 page views / day
- 3.8 pages/person on average
- Southeast Asia, north America, and Europe as well as Japan
- More than 70% come via search engines (Google / Yahoo!)
- More than 10K downloads a month
Place within Nagoya University

Open to public on Feb 28, 2006

President Hirano of Nagoya University, greeting in symposium (Mar 9, 2006)
Place within Nagoya University

- President’s greetings, Symposium
- Institutional repository at Nagoya University is a university-wide activity to digitally accumulate, preserve, and disseminate scholarly outputs
- For content enhancement, not only collaboration of all departments with the university library, but more importantly, willingness of researchers to make their research outputs publicly accessible
Place within Nagoya University

University-wide operation

- University-wide
  - necessary for perpetual stewardship
- Presidential briefing  2005/11/29
- Board briefing  2005/12/20
Significance for university

- Emphasize the strength of Nagoya U
- Social Accountability

University-wide operation

NAGOYA Repository
Place within Nagoya University (a big picture)

- President Board
- University Governance Headquarters
- CIO
  - Information Management Headquarters
- Office of Planning and Evaluation
- Information Technology Center
  - Committee for Scholarly Information
- Center for Information Media Studies
- Library
  - Library studies
- Departments
- Collaboration

Collaboration arrows connecting different entities.
Place within University (Executive level)

President
Board

As a university-wide operation

University Library

Library studies

Collaboration

University Governance Headquarters

CIO
Information Management Headquarters

Office of Planning and Evaluation
Collaboration with in-campus organizations

University Library
- NAGOYA Repository
- Academic Knowledge Factory
- Planning & Operation

Library Studies
- Eco-collection Database Operation

Information Technology Center
- Committee for Scholarly Information
  - PLUM
  - Authentication system

Research & Development
- Center for Information Media Studies
  - Open Course Ware Operation

Researcher Community

Departments
- Schools
- Graduate Schools
- Research Institutes

Contents Building
Collaboration with in-campus organizations

- University Library Studies = System development & Support
- Eco-Collection database
- AKF: Academic Knowledge Factory
Collaboration with in-campus organizations

- Information Technology Center = System development & support

- PLUM
- Nagoya Univ. ID system (Authentication)
Collaboration with in-campus organizations

◆ Center for Information Media Studies
  =Research and development

◆ Nagoya University Open Course Ware
  LOM = Learning Object Metadata
  NIME (National Institute of Multimedia Education) LOM
Collaboration with in-campus organizations

◆ The Office of Planning and Evaluation
Nagoya University Profiles of Researchers

- Library
- IR
- Knowledgebase
- Office of Planning and Evaluation
- Profiles of Researchers
Marketing activities

◆ Departmental briefing
  (19 meetings since 2006.2.1)
  - 20-30 min before department meeting
  - Explanation by Director of University Library and library staff
    - What is institutional repository?
    - Significance for university, researchers, and scholarly communication
    - Motivation for item registration
  - Q and A

574 faculty members have attended
Marketing activities: Feb-Jul 2006

<table>
<thead>
<tr>
<th>日時</th>
<th>学部</th>
<th>場所</th>
<th>備考</th>
</tr>
</thead>
<tbody>
<tr>
<td>2月 1日 (水) 13:00-13:30</td>
<td>経済学部・経済学研究科</td>
<td>2F 第一会議室</td>
<td>教授会の前の時間</td>
</tr>
<tr>
<td>2月 8日 (水) 13:00-13:20</td>
<td>文学部・文学研究科</td>
<td>文学部127講義室</td>
<td>教授会の前の時間</td>
</tr>
<tr>
<td>2月 8日 (水) 14:00-14:30</td>
<td>法学部・法学研究科</td>
<td>法学部 会議室</td>
<td>教授会の途中</td>
</tr>
<tr>
<td>5月31日 (水) 14:00-14:20</td>
<td>農学部・生命農学研究科</td>
<td>管理棟1階大会議室</td>
<td>教授会の前の時間</td>
</tr>
<tr>
<td>6月21日 (水) 13:30-14:00</td>
<td>情報科学研究科</td>
<td>附属図書館5階多目的室</td>
<td>教授会の前の時間</td>
</tr>
<tr>
<td>7月5日 (水) 15:00-</td>
<td>環境学研究科</td>
<td>環境総合館1階レクチャーホール</td>
<td>教授会の前の時間</td>
</tr>
</tbody>
</table>

http://ir.nul.nagoya-u.ac.jp/pub/koho/IR_setumeikai.html
Problems

- Researchers understand but few registrations
- Author versions are often lost
- Nervous on different appearances and contents
- Con: faculty evaluation
Problems

FAQ

We do not want to have files publicly available if they are different from published version. Only published versions are research output.

Redundant PDF copies appear. It is not cost effective.

Researchers are professionally trained to find primary information. Then repositories are for private sectors, not for university researchers.

It is not cost effective that each university operates an institutional repository.

We want to publish our research output as books. We do not want to register them if institutional repositories work against book-form publication.
Researcher community

- Allow IR deposit of files on personal webpages.
- Mention to NAGOYA Repository on their websites
- Propose e-submission of theses at department meetings
Researcher community

- Allow IR deposit of files on personal webpages.

Thank you for your briefing on institutional repository. The idea impressed me.

Some PDF of my papers are available on the web server of my office.

Please deposit them if there is no problem. I will make links to your repository from my website.
Researcher community

◆ Mention to NAGOYA Repository on their websites
  Links with handle from the paper list

August 18 (Fri.), 2006
Deposited the following papers with permission of △△ society. Near xxx
xxxxxx xxxx xxxx Annals of the •••

August 16 (Wed.), 2006
Link from my paper list to Nagoya Repository

http://hdl.handle.net/2237/****

August 11 (Fri.), 2006
Got a completion notice of Nagoya Repository deposit. They are helpful. They negotiated with ○○○○.
Researcher community

- Forming a community of IR-friendly researchers to enhance deposits
- Forming a community of hundreds of researchers to support IR
Significance for researchers

Researchers can disseminate their own outputs to the world

More access, more visibility cited 5.6 times more in physics

All outputs of a researchers will become searchable and accessible when more data are accumulated
Significance for researchers

- University stewards digital files for the next generation

- Permanent access

URL: http://hdl.handle.net/2237/4377

NAGOYA Repository

Paper number
Problems

- Copyright permission
  - Too much care of publishers and academic societies
  - Paper list becomes not comprehensive if some are not permitted
  - Time consuming process for permission
  - Contacts to coauthors are sometimes difficult
Problems

 Publishers and academic societies

Copy-right transfer is common. So publishers and societies are in charge of permission, not authors.

I published my dissertation as a book this January. It is not polite to the publisher that I deposit the file to IR. I will consider to deposit it 3 years later.

IEEE holds the copyrights of papers published by IEEE. I believe that authors can personally distribute a copy, but universities cannot, since nobody will buy a paper from IEEE. Please doublecheck.
Copyright policies

- Publishers out of Japan
  - SHERPA
    Publisher copyright policies & self-archiving
    http://www.sherpa.ac.uk/romeo.php
  - Investigation of copyright policies on the websites of publishers and academic societies
  - Hearing if unclear or unable
Copyright policies

◆ Publishers in Japan
  ◆ JANUL IR support website
    http://www.tulips.tsukuba.ac.jp/ir/
    A quick report on copyright
  ◆ Investigation of copyright policies on the websites of publishers and academic societies
  ◆ Hearing if unclear or unable
    - intended to enhance clear copyright documentation
Copyright policies

◆ Publishers

◆ OK for publishers version
  IEEE • AIP • INFOSTA • IPSJ
◆ Individual permission • IEICE
◆ Under consideration • NLP • JSPE...
◆ No reply • Astronomy
◆ No permission • IEE • JSPE

investigation results
75% of publishers and 93% of journals agree self-archiving outside of Japan.

- Most permit author version, while some permit publisher version.
- Domestic journals: under investigation by JANUL
  Many publishers are under considerations
- Self-archiving with author permission only is OK if there is no documented copyright condition (e.g. proceedings of international conferences)
Significance in scholarly communication

- Commercialistic publishers lead scholarly communications
  - High pricing
  - Researchers should play the main role!

- Open access
- Researcher-based communication
- Social contribution
- Shared resources

Universities:
- A Univ.
- B Univ.
- C Univ.
- D Univ.
Problems

Summary

- Researchers should sufficiently understand copyright issues
- Libraries provide and update copyright information
- Libraries negotiate with publishers on behalf of authors

Objections are better than ignorance
Ongoing content collection

- Dissertations submitted to graduate school of information science
- Deposit request and agreement form are distributed at dissertation orientation
- Electric files of dissertations are forwarded to the university library

Graduate School of Information Science

Library
Interuniversity collaboration

- CSI operation, area 2: innovative research and development

- Development of link resolver ready system

  Hokkaido (main)
  Tsukuba, Chiba,
  Kyushu, Nagoya
Inter-university collaboration

◆ Development of link resolver ready system

**AIRway** (Access path to Institutional Resources via link servers)

◆ More access counts to institutional repositories
◆ More visibility
◆ Metadata standard and system implementation

2006/10/25  AIRway Mailing List

>> AIRWay本番用サーバを立ち上げました。
>> http://airway.lib.hokudai.ac.jp/airway/index.jsp
>>
>> 現在、HUSCAPとNAGOYA Repositoryのデータが入っています。
Inter-university collaboration

◆ Meetings of IR staff in national universities in Tokai area
  ◆ Toward collaboration in the area
  ◆ Sharing experiences of Nagoya University
    NAGOYA Repository Labs. (website)
    http://info.nul.nagoya-u.ac.jp/pubwiki/

◆ CSI operation symposium in Tokai area
  1. UPKI  9/22
  2. IR  11/8
  3. UPKI and grid computing  12/15