Bridging Continents

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NII-funded Programs

NII-IRP (Institutional Repositories Program)
http://www.nii.ac.jp/irp/en/

- Phase 1: FY2005-2007
- Phase 2: FY2008-2009
- Phase 3: FY2010-2012

Three categories of funding

- Area 1: Support for developing IRs and content creation
- Area 2: Research and development
- Area 3: Support for community activities

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<th>Phase 1</th>
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<td>2005</td>
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<td>Area 1 (Institutions)</td>
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<td>Area 2 (Projects)</td>
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<td>Area 3 (Projects)</td>
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Expansion of IRs until 2011
Almost all national universities have their own IRs, while the implementation rate of other public/private universities hovers at 20-30% in 2012.
Matters Surrounding IRs in Japan

- Ministry of education and research in Japan mandated the digitalization of doctoral dissertations and their dissemination over the network.
  - In 2013 when the above was stated, there still were about 200 universities which does not have IRs.
- There are more than 700 HEs in Japan
- The universities which have already owned their IRs were also struggling with how to update and maintain the system in the sustainable manner.
What is about JAIRO Cloud?

Outline

- Limited resources and less technical knowledge hamper implementation of IR especially in small universities.
- JAIRO Cloud provides a shared instance of IR system on the virtual server hosted by NII since April 2012.

Service Architecture

- NII offers easy-to-navigate IR platform with free-of-charge in initial stage.
- An easy-to-use repository module “WEKO” used in the service.

Target

- More 200 IRs by the 2017 fiscal year
Service Architecture

Institutions
- Registering and publishing content
- Screen UI management

NII
- Software management
  Initial settings
  Update etc
- OS management
- Hardware management
- Network management

A University Repository
- WEKO
- NetCommons2
- Guest OS

B University Repository
- WEKO
- NetCommons2
- Guest OS

Host OS
Hardware and Network

CiNii
JAIRo

ACCESS
USER
ACCESS
Current Number of IRs in Japan

651 IRs

Number of Repositories

Year

- by JAIRO Cloud: Pilot Operation
- by JAIRO Cloud: Production Operation
- by University On-premise System
Portal services of Japanese IRs

- NII harvests almost all Japanese IRs
  - JAIRO is a “gyroscope” of IR content
  - Use it to search all IRs in Japan at once!
  - IRDB Content Analysis shows how contents are growing and gives detailed information on each IR.
  - CiNii is the largest database of academic journal articles in Japan.
  - Metadata on journal articles and departmental bulletins goes to CiNii and is linked to the full texts in the IRs.

- junii2 is a “Dublin Core” application profile for institutional repository with an OpenURL compliant schema.
- It has been adopted by almost all IRs in Japan.
  
Repository Community

- Digital Repository Federation, since 2006
- JAIRO Cloud Community, since 2012
- Institutional Repository Promotion Committee, since 2013

Planning From 2016
- Japan Consortium for Open Access Repository (JPCOAR)

- What can we do for the world wide OA activity?
- What is the actual International collaboration?
Why bridging continents
Work with Asian Friends

Kick-Off Meeting for Asian OA Community
2016-03-03
Bridging Continents

- Open Access
  - Basic
    - Propagates our Open Access Experiences to Asian Communities
  - Advanced
    - Contributes Japanese Contents to the International Aggregator
    - Current Open Access Policy Deployment in Japan
      - Firstly Adopted by Kyoto University in 2015 and followed by Tsukuba University, Tokushima University, Kyushu University International Research Center for Japanese Studies.

- Open Research Data?
Promoting Open Science in Japan
Opening up a new era for the advancement of science

Executive Summary
Report by the Expert Panel on Open Science, based on Global Perspectives
Cabinet Office, Government of Japan
March 30, 2015

It is vital for Japan to participate in international discussions and to demonstrate a proactive approach to the promotion of open science. The Expert Panel on Open Science based on Global Perspectives has discussed various relevant issues of immediate importance for Japan. Based on these discussions, the Panel presented the guiding principles for promotion of open science in Japan.

I. The Importance of Open Science
“Open science” refers to a new approach to promoting innovation through knowledge creation in science and technology. This will be realized by facilitating access to and use of publicly funded research results such as scientific papers and their underlying data by the scientific community, industry and the general public. The concept of open science is spreading rapidly. At the G8 Summit held in June 2013, G8 Science Ministers issued a joint statement that endorsed the need for increasing access to publicly funded research, including peer-reviewed published research and research data. The statement triggered discussions in various forums worldwide.

Research community, and to the decline of Japan’s international competitiveness. Japan should keep pace with the global advancement of open science in a collaborative yet also strategic manner, so that the value of Japan’s latest research and development activities can lead to business activities at the next stage.

II. The Need to Promote Open Science
Open science may change scientific research. It will not replace traditional research methods, but will add new tools that help to advance science. It will make research results widely available in digital formats to all users including the scientific community, industry and the general public. This will enable additional value to be extracted from science and technology information, which will not only improve our knowledge, but will also reform innovation strategies.

For the scientific community, the acceleration of data-driven activities is expected to lead to new collaborations and to the prevalence of new research methods among researchers within the same research discipline and beyond. Industry and individuals are also expected to gain as they develop new products and services as a

Framework of the Open Science in Japan

NII SINET5 Infrastructure

Collaboration and Promotion in Research and Education

Resource
- Promotion of academic information circulation and open access
- Collaborative promotion of institutional repository expansion

Federation
- Collaborative enhancement of authentication between universities

Cloud
- Dramatic cost reduction and enhancement of research and education environment by tailored cloud services

Security
- Network flow analysis and dynamic control
- Raise of security level for SINET users

Network
- Nationwide 100-Gbps backbone network and scalable network expansion
- High-speed direct international lines to USA, Europe, and Asia
- Introduction of new technologies such as SDN in response to user needs

SINET5 will start in April 2016

Flow Analysis

GakuNin-Cloud
Direct Connection

VPN
Am I True?

- Importance of the Synchronization between Policy and Infrastructure development
  - Is there an understanding that policy and infrastructure are the inseparable pair?

- Impact of the National Level Infrastructure
  - Not only for the individual domain effort, national level infrastructure has strong benefit?

Cooperation rather than Competition?
We can work together?