a short version for the hands-out to the CONCERT 2010.



# **Collaboration of Scholarly Communication** - **Advancing libraries in Japan**

Mikiko Tanifuji General Manager National Institute for Materials Science Library (物質材料研究機構 図書館)

CONCERT 2010 Meeting @STPI, Nov 10-11, 2010



## About myself

- University librarian(大学図書館)
- Society Publisher(学会出版社)
- 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)





## About NIMS Library



### Outline

- 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
- Open Access
- Scientists scholarly communication in digital world
- Digital Library, NIMS eSciDoc: researchers-oriented infrastructure
- Role of librarians and beyond in digital era
  - Librarians as information strategists
  - Librarians' visions for the future



### 1. Advancing library networking and collaboration

### - Library Associations

		研究所図書館 Nati Res Inst Libraries		
	国立大学 National Univ. (86)	Public Univ. (75)	Private Univ. (591)	国立研究所 Gov. Res. Inst. (9/104)*
No of Students No of Faculties	606,147 61,246	133,676 12,402	2,051,485 98,391	9,124
Library Materials Expenditures	\$59,249,840	\$12,562,550	\$198,196,040	\$17,734,570
(ave / inst) (ave / person)	\$688,950 \$89	\$167,500 \$86	\$335,360 \$92	\$1,944
Number of Librarians	1808	381	3889	91
(ave / inst)	21	5	7	10
Source: 文部科学省学術情報基盤実態 Makoto Nakamoto, Administ	*Source: 104=総務省,独立行政法人 データ, 2010. 9=JNJ C members			

3 million users/761 organizations => \$288 million



#### 1. Advancing library networking and collaboration

### - Library Collaboration

	大学図書館 Univeristy Libraries			研究所図書館 Natl Res Inst Libraries	
	国立大学 National Univ. (91)	公立大学 Public Univ. (79)	私立大学 Private Univ. (520)	国立研究所 Gov. Res. Inst. (9/104)	
Association	Japan Association of National University Libraries	Council of Public University Libraries	Japan Association of Private University Libraries	Japan National Research Institutes Library Consortium	
Established	1967	1955	1938	2008	
E-Journal Consortia	2000	2003 PULC 374		2008	
- Consortia	JANUL			JNLC	
- Members	91			16	
- Publishers	24	55	318	4	
Collaboration	Japanese Coordinating Committee for University Libraries - Collaboration among				
Activities	- 1982 launched - Collaboration and coo	research institutes funded by the Japanese government			
	- Information exchanges				
Source: Makoto Nakamoto, Administrative Director, Waseda University, 2010 Nov Source: JNLC.JP					



### **JNLC.JP**

#### Location

Please select institution(s) in the left column and click the pointer in the map for details



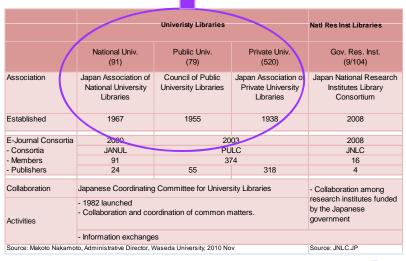


### JNLC.JP

- 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.





#### INTERNET Watch

体系発表 [2010/11/08]

F YouTube TRAVEL」開設、羽 田から就航した世界 を掲載 [2010/11/08]

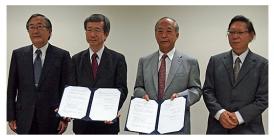
ネットスター、フィッ シングサイトのフィル タリングリスト配信を 最短5分で [2010/11/08]

iPhoneから写真力 ントが注文できるア プリ「バレット55プレ [2010/11/08]

NTTドコモ10年 冬~11年春モデル 国公私立大学図書館が団結、電子ジャーナル購入で大規模コンソーシア

B! ♥ 🛂 💋 ➡ ⑩ チェッ2 ❤ツイートする < 180</p>

国公私立大学図書館と国立情報学研究所は10月13日、従来の電子ジャーナル・コンソー シアムの連携を強化、新たな組織を立ち上げるための協定を締結すると発表した。協定をも とに、国公立大学の500近い加盟図書館を持つ大規模コンソーシアム形成に向けて活動を 開始。大学の研究活動で必要とされる電子ジャーナルを安定的に提供できる体制を整える。



左から東京大学附属図書館長 古田元夫氏、慶應義塾大学メディアセンター所長 田村俊作 氏、国立情報学研究所長 坂内正夫氏、横浜市立大学学術情報センター長 中西新太郎氏

スマートフォン4機種 ● 寡占市場を背景に毎年値上げする大手出版社に統一交渉で対抗



提言

学術誌問題の解決に向けて

― 「包括的学術誌コンソーシアム」の創設 ―



Recognition by scientists;

- scholarly journal publishing

Statement of Japan

Science Council, 2010

- access rights to scholarly *eJournals* 

Need to be fostered on a global scale.

平成22年(2010年) 8月2日 日本学術会議

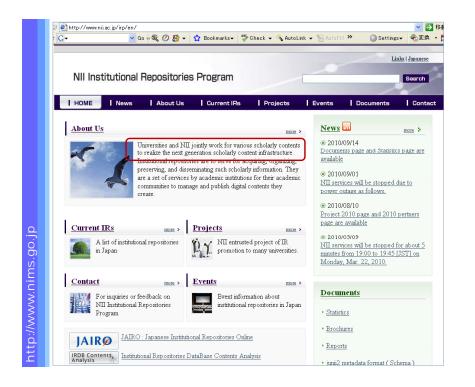
科学者委員会

学術誌問題検討分科会

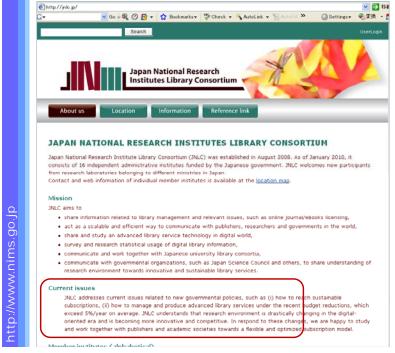


- 1. Advancing library networking and collaboration
- Library Consortia and the future
- Shared licensing for E-Journals (Big Deal)
  - Negotiators (volunteers -> professional)
  - Know-how on communicating with publishers
  - Documentation for the public
  - Lobbying library users/ organizations / governments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







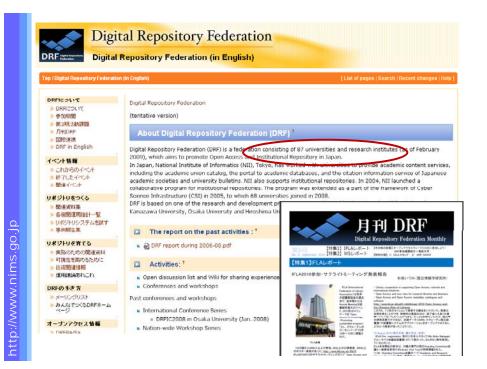












1. Advancing library networking and collaboration

### - 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
    - Developping 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

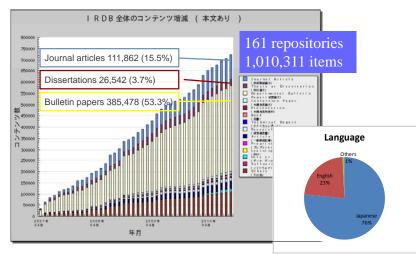
- Policy of repository and open access
  - Universities
    - Example: Tsukuba university
      - University staff and students
      - Research output and published articles, dissertations, private communications.
      - Library investigates copyright, and potential damage to other parties, by making 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

/www.nims.go.jp

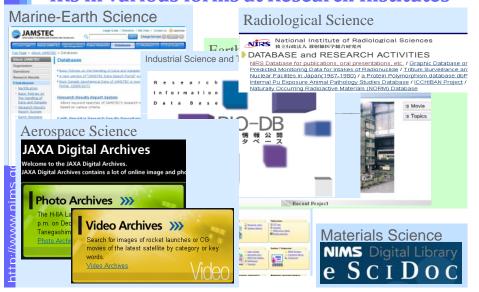
#### - Growth of IRs







- IRs in various forms at Research Institutes

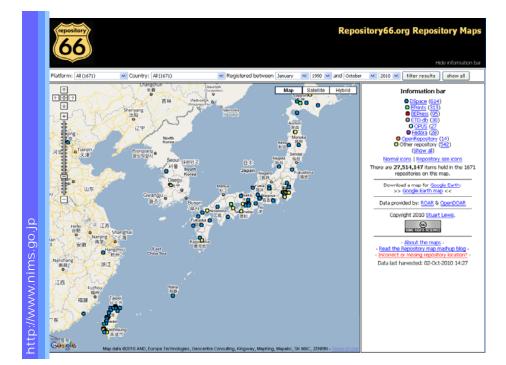


- 3. Open Access
- Governmental support for IRs and digital archives





- 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 openaccess.
    - *For example*: SCOAP3 in high energy physics
  - Libraries expect open-access to replace the subscription model.
    - However, no successful cases have yet been reported.



#### 3. Open Access

#### - Open Access Journal in materials science

- Science and Technology of Advanced Materials, published by National Institute for Materials Science (NIMS)
  - Profile
    - 10<sup>th</sup> 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.

#### 3. Open Access

### - Open Access Journals

Practice in Japan Academic journals published by non-Japanese publishers •J-Stage 590 titles (2010 Feb) Blackwell •English 207 (44%) •Japanese 37 (37%) Elsevier •Eng + Jpn 260 (19%) [Note] 1742 societies in all fields. Source:学会名鑑2007-2009 OUP Japanese Business model agency •Free access 454 (77%) 53% •Others 136 (23%) Springer subscription, partially free, free to members etc. Author-paid OA • **Physics** 8.5% • Chemistry 1.0%

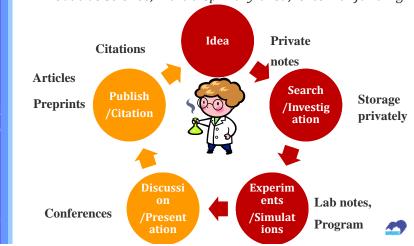
By M. Tanifuji, 2007

#### 4. Scientists

#### - e-Research Environments

for full papers in 2008

• Scholarly communication is changing; requirement of innovative science, multidisplinary area, external funding....



#### 4. Scientists

#### - e-Research Environments



# A survey for NIMS researchers, "What does e-Research mean to you?"

When do you need to share and disseminate your research?

- $\times$  not at the primary stage of the research cycle
- O preprint stage, *perhaps*
- O published papers, *definitely* + *maybe* supplementary materials
- O find audience: who? /where? / how many? / for which paper(s)?

#### Digital library towards e-Research environment;

- a <u>secured</u> storage, standard xml-web-based database
- with simple user interface

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- that allows self-archiving of various items
- with an <u>access management</u> (myself / NIMS only / OA)
- and a <u>visualized log access</u> view for researchers
- by using standard protocol (OAI-PMH).

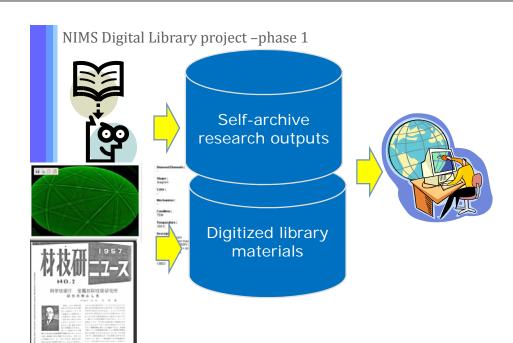


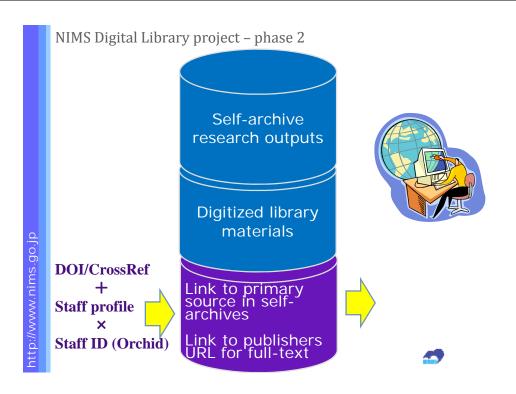
#### **5. Digital Library**

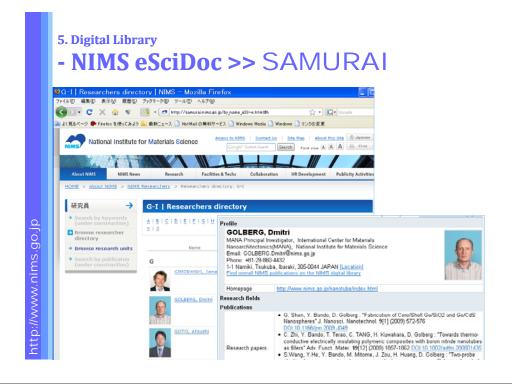
#### - NIMS eSciDoc

- 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 ⇔ ...







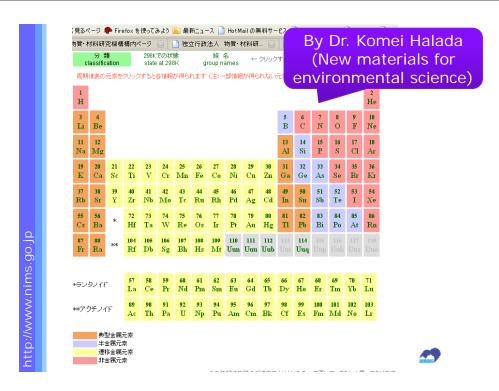




### - Librarians, as information strategists

- Stakeholders of scholarly communications
  - Researchers, students
  - Institutes, governments as funders
- Rich information in library can
  - Be designed <u>effectively</u>
  - Be customized for stakeholders
  - Provide new and innovative library services
    - For example...



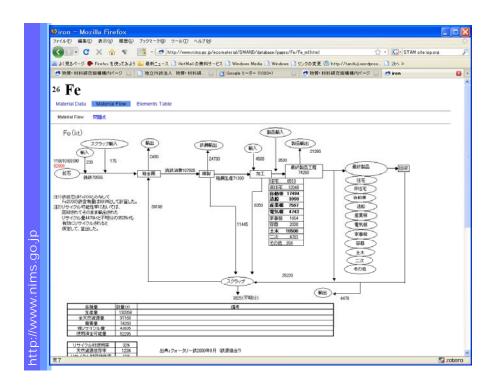


#### 26 Fe

Material Data Material Flow Elements Table						
元素名 Name 鉄 [英 iron]						
原子番号:	Atomic number	26				
原子量: Atomic weight		55.847(3)				
族:	Group	8				
周期: Period		4				
電子配置 Shell configuration		2,2,6,2,6,6,2				
電気陰性度:	Electronegativity	1.83				
単体融点:	Melting point	1540°C				
単体沸点:	Boiling point	2750°C				
商党解释	Heat of fusion	15.1kJ/mol				
蒸発熱	Evaporation heat	354kJ/mol				
熱容量	Thermal capacity	25.1J/K· mol				
熱伝導率	Thermal conductivity rate	80.3W/m·K				
線膨張率	Linear expansion rate	0.138×10 <sup>-4</sup> /K				
単体密度	Density	7.87g/dm <sup>3</sup> (20°C)				
ヤング率		193~200×10 <sup>9</sup> N/m <sup>2</sup>				
抵抗率		9.71×10 <sup>-6</sup> Ωcm				
備考:	Other					







 ${\bf 6.}\ Role\ of\ libraries\ and\ beyond\ in\ digital\ era$ 

### - 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,

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- By working together with researchers and
- By collaborating with libraries worldwide
- By employing standard data-transfer-protocols and metadata schema in library contents.



# Future of open access publishing in libraries?





