2014 SPARC Japan Seminar

OA Activities in Korea

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Korea Institute of Science and Technology Information

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Gold Road in Korea

1. Medicine & Healthcare Community

- Korean Academy of Medical Sciences(KAMS) initiated Gold OA Activities Firstly in Korea by developing Electronic Journals with existing English Written Medical Journals for the purpose of Globalization
- KAMS members agreed to cover the cost for XML based Quality Journal Publishing which is one of NIH PMC requirements
- Organized 'KAMJE(Korea Association of Medical Journal Editors)' to carry out concerned project

1. Medicine & Healthcare Community

- Developed KoreaMed to provide I&A Services for 210 Journals, most of which are FA/OA
- Developed KoreaMed Synopse to provide Digital Archive and Reference Linking Services. All of 147 Journals in the Synopse Platform are OA ones with CCL

2. Sci & Tech Community

- **KISTI's S&T Society Village**
  - – Started this service in 1997 by benchmarking of J-STAGE, and has been providing Free Access to total **889 S&T Society Journals and 664,416 Articles**(137,297 with DOI)
  - – This Service is based on Mutual Agreement between S&T Societies and KISTI, without any concept/intention of "Open Access" in the beginning
- **KISTI's OAK Project**
  - – Developed 25 Journals(10,013 articles) conforming to Gold Road processes in collaboration with KOFST(Korea Federation of Science and Technology Societies)
- **Korea Association of S&T Journal Editors under KOFST**
  - – Influenced by KAMS, KOFST organized Korea Association of S&T Journal Editors to help KISTI develop OA Journals
  - – Employed OA Criteria for Evaluation of Society Journals since 2012
- **KISTI's KoreaScience**
  - – a DOI Landing Page for Global Disseminations of Selected Journals: 359 titles listed now
  - – 338 Journals among them are FA/OA Journals
- **KISTI's K-Pubs**
  - –Building an Integrated Platform is under way to technically facilitate Full Life Cycle of Publishing thru Global Dissemination of S&T Societies' Journals
  - – All of produced data on the Platform will be Open to the Public
  - – It will be integrated with existing Peer Review S/W(ACOMS int'l ver.), DOI system, CrossCheck, PDF2XML Workbench, Korea Science Citation Index and new added Functions together with necessary Tools and Accessories

2. Sci & Tech Community

- **K-Pubs**

S&T Society Village
과학기술학회마을

ACOMS
학회논문투고관리시스템
Article Contribution Management System

doi>

cross check
Powered by iThenticate

KOREASCIENCE
REFERENCE LINKING PLATFORM OF KOREA S&T JOURNALS

ssref

CITEDBY

LAW

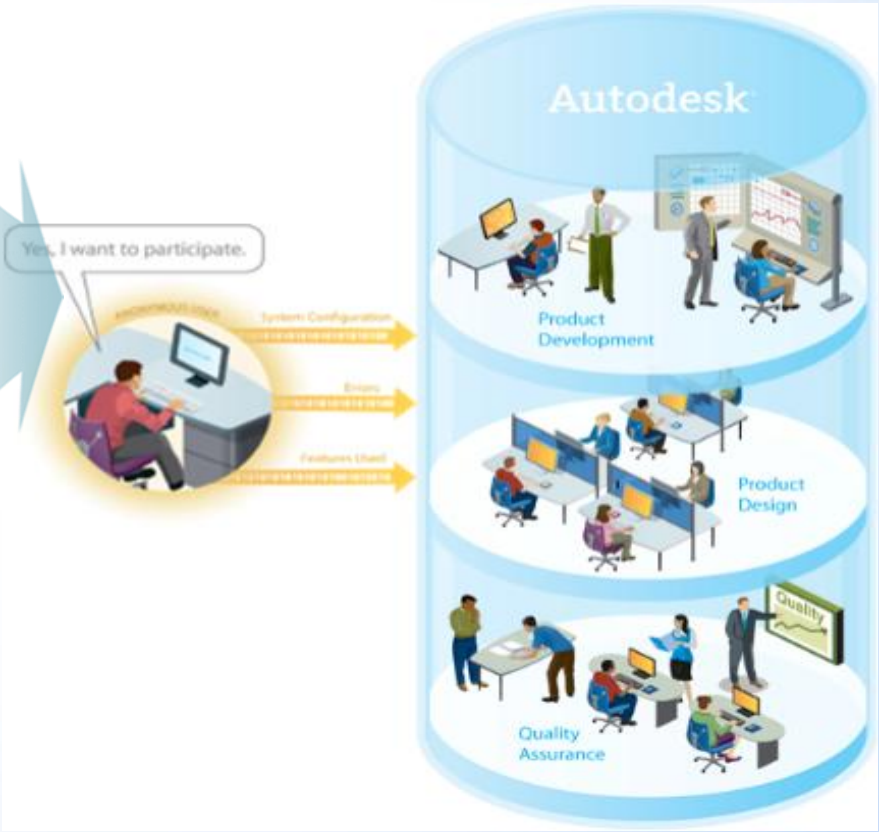
OPEN ACCESS
www.plos.org

XML

KSCI
한국과학기술인용색인서비스
Korea Science Citation Index Service

Integrated Platform

Journal Publishing & Global Dissemination



3. Humanity & Social Sci Community

- **NRF came to have more understanding of and interest in OA by joining in GRC activities**
  - ✓ Since 2012 NRF is responsible for funding of Humanity & Soc Sci Journals, KOFST, S&T Journals
- **NRF also employed new evaluation criteria for encouraging OA journal publishing for Humanity & Social Science Journals from 2012**
  - ✓ Private Information Providers are strongly against NRF's and KOFST's OA policies
- **NRF is planning to build a OA Repository for the funded journal articles**
- **Concerned Community People have comparatively lower understanding and needs of OA than other Communities**

4. Government funded R&D resulted Scholarly Articles

- Critical Mind about Subscription Payment for Government funded R&D resulted Scholarly Articles
  - ✓ 63% of Korean Articles published on SCI Journals are Government Funded
    - * SCI articles(year 2008): 35,569 vs Government funded SCI articles 22,528 ➔ 63%
  - ✓ Korean People have to pay to overseas publishers to read over 60% of SCI articles even if they were resulted with Government funds

4. Government funded R&D resulted Scholarly Articles

- **Making a Public Access Law for Publicly Funded Research Articles has been failed due to concerned Ministry(MCST)'s Passive Reponses**

- **MOHW established, however, a Regulation mandating Public Access in 2012**

  1. Minister should build a database of research outputs and make it open to related research, industry, and academic communities
  2. Minister should designate KNIH as a dedicated agent to open and share those research outputs
  3. Minister should Link the Database to NTIS for further dissemination of the research outputs

✓MCST: Ministry of Culture, Sports, Tourism
✓MOHW: Ministry of Health & Welfare
✓KNIH: Korea National Institute of Health

Ⅱ Green Road in Korea

1. University IRs

KAIST KOASAS(http://koasas.kaist.ac.kr/)

- 1st Institutional Repository launched in 2007
- Benchmarking of MIT DSpace
- Influenced Other Institutes
- Articles, Reports, Dissertations
- Activated by interlinking with Internal Performance Management System

SNU S-Space(http://s-space.snu.ac.kr/)

- Influenced by KAIST's IR, SNU Opened its IR in 2008
- Articles, Reports, Dissertations

Inha Dspace(http://dspace.inha.ac.kr/)

- Open in 2009
- Articles and Reports

1. University IRs

〈Operational Status of Major University Digital Repositories〉

Item		KOASAS(KAIST)	S-Space(SNU)	INHA Dspace(Inha Univ)
Written Documents for Operations		· None	· None	· in Preparations
Submissions	Target Materials	· Journal Articles, Conference Papers, Dissertations, Research Reports	· Pre and Post print of Articles with copyright, Conference Papers, Project Reports, Dissertations, Lecture Notes, Research Notes	· Journal Articles with copyright, Conference Papers, Research Reports, Technical Materials, Charts, Pictures, Designs, Event Materials, Historical Records, etc
	Version	· Not Described	· Edition with copyright	
	File Format	· PDF	· PDF	
	Materials prior to IR	· All produced after Appointment	· All prior to IR	-
Presenter	Target Presenter	· Faculty	· All Employees	·Faculty, Graduate Students,
	Person in Charge	· Presenter in Charge decided by Lab	· Not decided. Sometimes Librarians do the job.	· Presenter in Charge stated. Librarians do the job for the time being
Copyright Dealing		· by IR Operator	· jointly by Presenter and IR Operator	-
Level of Requirements		· Recommendation Level	· Recommendation Level	· Recommendation at Present, Mandates in the Future

2. KISTI supported IRs

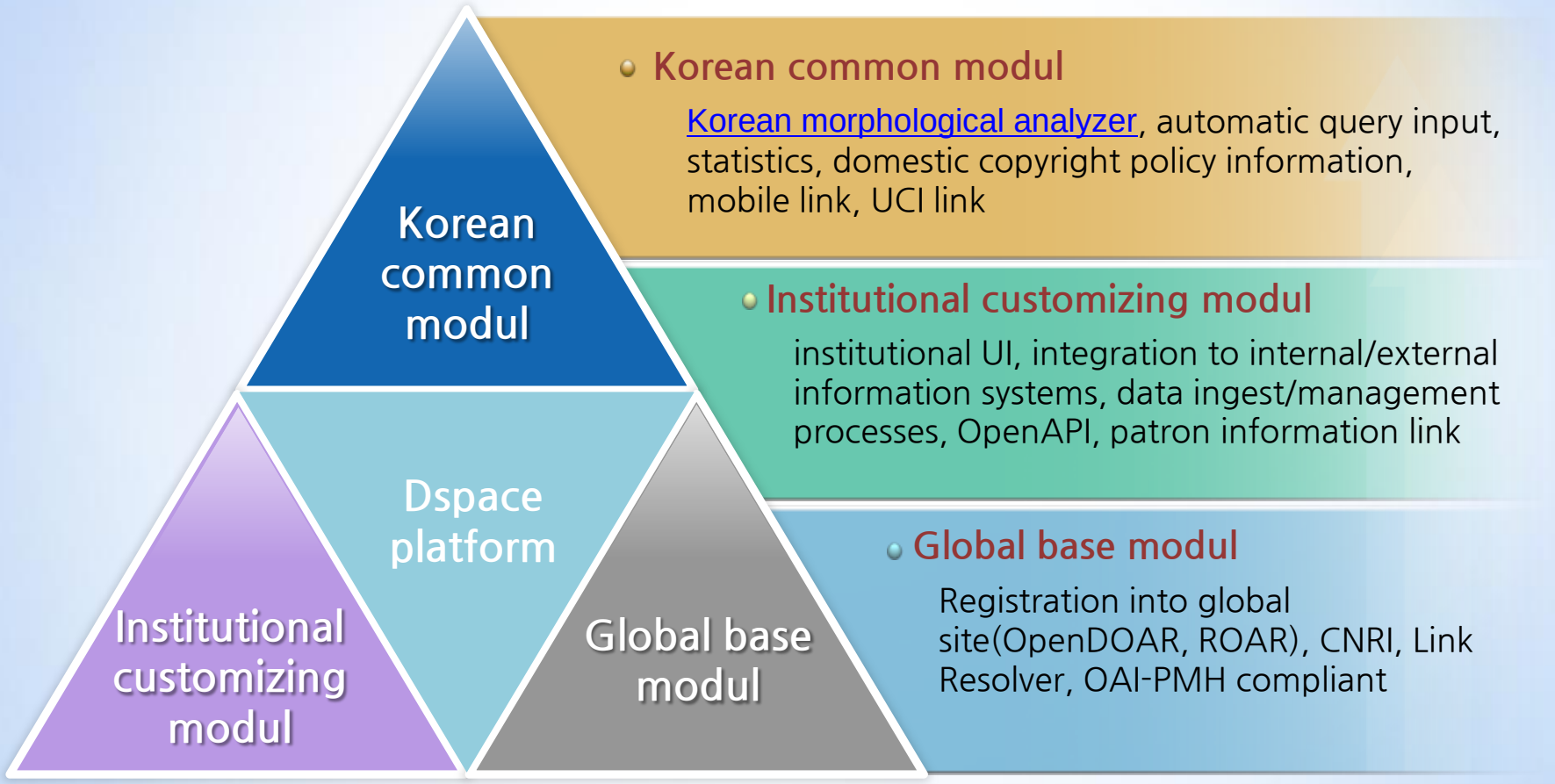
- **23 IRs built over 2010 thru 2013 under the OAK project**
  - Research Institutes(16)
  - Universities(2)
  - Government Bodies(1)
  - Information Centers(2)
  - Public Libraries(2)

- **Funded by MCST(Ministry of Culture, Sports, Tourism)**

- **Selecting Institutions was made in discussion with KERIS(dCollection)**
  - ✓ Tried to Target Other Institutions than Universities

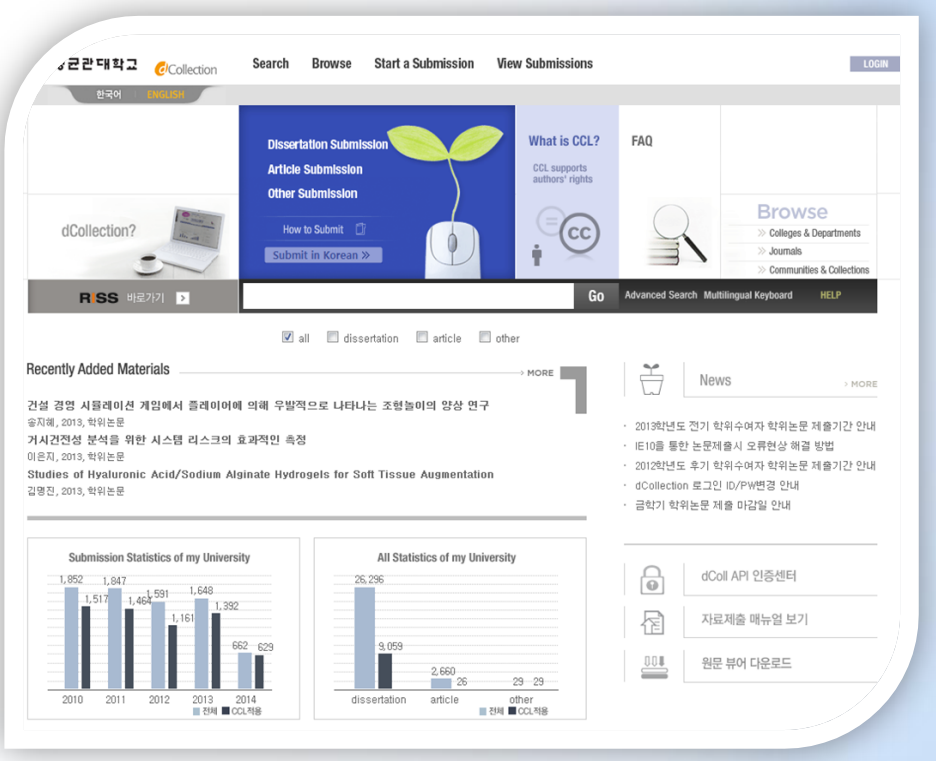
2. KISTI supported IRs

- Korean Localized IR Model



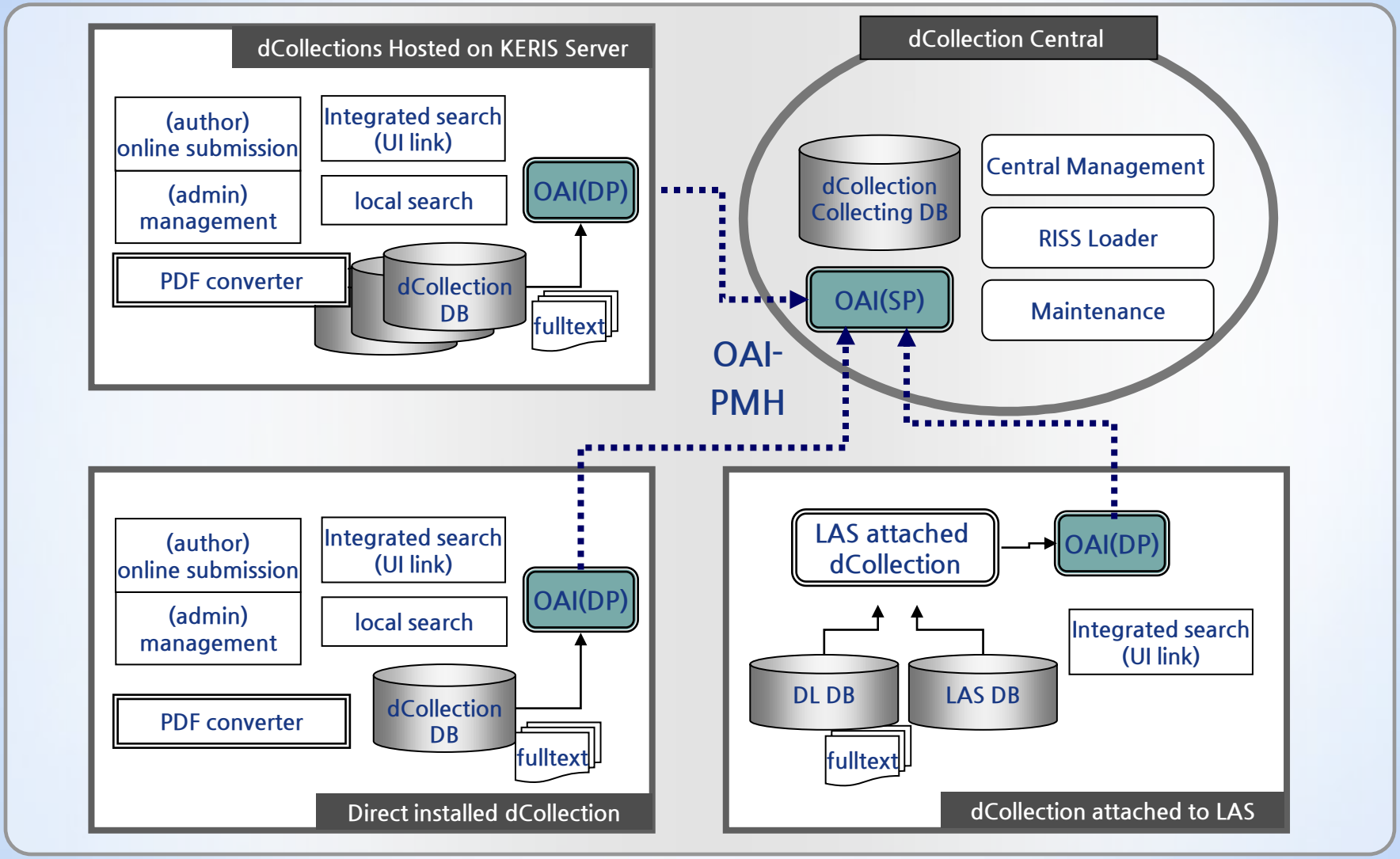
3. KERIS supported dCollection

- Networked Institutional Repository System
- Self-Archiving and Sharing of Dissertations and Scholarly Papers
- 225 dCollections Installed in the Universities from 2008
- Operating by dCollection Steering Committee
- Integrated Meta Search and Gateway Service to Fulltext provided by RISS of KERIS
- Do NOT Conform to OAI-PMH



3. KERIS supported dCollection

〈dCollection Configuration〉



4. KERIS' KOCW(Korea Open CourseWare)

KOCW(http://www.kocw.net)

- Goal: To build a Open Repository for Expanding Learning Opportunity of Higher Education and Enhancing Lecture Quality by Opening CourseWares of the Universities
- Target Users : General Public
- Content: Lecture Materials produced Domestically and Overseas
- Start: 2007

4. KERIS' KOCW(Korea Open CourseWare)

〈Yearly KOCW Status (as of 2013. 12)〉

	2008	2009	2010	2011	2012	2013
Participating Institutions	33	86	105	129	152	171
Lectures	149	561	1,358	2,768	4,637	6,800
Educational Materials	2,438	6,529	15,259	37,713	63,353	98,462

〈Content Types of KOCW 〉

Type	Major Content
Lectures by Nobel Laurates	**Ivar Giaever, Nobel Prize in Physics**(1973) et al 22
Lectures by NAS members of Korea	Professor Soon Cho, SNU, et al 7
College Basic Lectures	Basic Subjects by Disciplines 200
Foreign Language Lecture Series	17 Languages, 60 lectures incl. English, Vietnamese, etc
Broadcasting Content Lectures	13 Programs including Vocational, Arirang TV, etc.

5. Disciplinary Repositories supported by NRF

- 12 DRs were launched in 1995 ➔ 7 operating as of today
- IP Rights of repository content owned by both Government(NRF) and repository operating universities.
- Performance Evaluation based Operations

〈7 Repositories by Discipline〉

Repository	Basic Sci	Life Sci	Medicine	Traditional Korean Medicine convergence	Mechanical, Construction, Transportation	Chemical Engineering /Material Sci	Electronic/ Information Sci
Location	KAIST	POSTECH	Chungbuk Nat Univ	KyungHee Univ	Pusan Univ	Korea Univ	Chungang Univ
Subjects	Math Physics Chemistry Earth Sci	Life Sci: basic Life Sci: Applied Food, Agriculture, Forestry and Fisheries	Med. Sci Dental Nursing	Pharmaceutical Traditional Korean Med	Mechanical Construction Transportation	Materials Chemical Eng	Electrical/ Electronic Eng Communication Computer

5. Disciplinary Repositories supported by NRF

- **Cumulated Digital Content in DRs** (as of Oct 31, 2013)
  - Research Outputs/Trends/Resources: 42m items
  - Specialized Content: 2.2m items
  - Multimedia Content: 35,500 items
  - WebZines & Newsletters: 10
  - Subject Communities: 180

6. P-cube of KISTI

- Scientific Data Repository developed by KISTI
- Target Users : Government Subsidized Research Institutes
- Currently Distributed at 5 Research Institutes : KRISS, KOPRI, NFRI, KOBIC, KISTI's MDR(Medical Data Repository)
- Open and Sharing Research Data thru KISTI's Metadata Portal

✓KRISS: Korea Research Institute of Standards and Science
✓KOPRI: Korea Polar Research Institute
✓NFRI: National Fusion Research Institute
✓KOBIC: Korean BioInformation Center
✓KISTI's MDR(Medical Data Repository)

Open Access Korea(OAK) Project

1. Overview

- MCST funded 5 year Project(2009~2013)
- 240 m/m with the total Budget of **KRW4,361,000,000**
- To Share Domestic Knowledge Information and Develop Advanced Information Environment by Promoting OA Movements in Korea

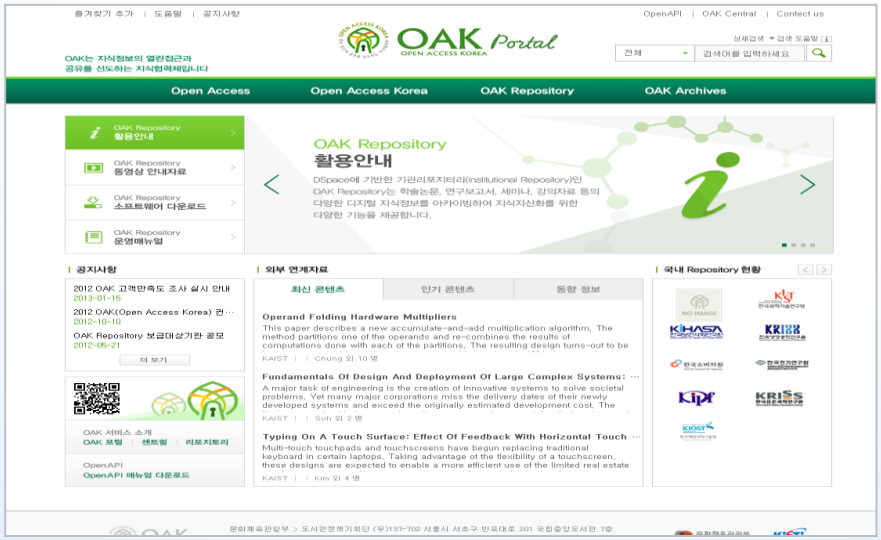
2. OAK Central

- OAJ Archiving and Global Service Platform
- Development of Digital Archive of XML based electronic OA Journal Fulltext(25 Journals: 10,013 articles) in collaboration with KOFST program of supporting Globalization of Domestic S&T Journals
- Development of PDF2XML Workbench
- CCL and DOI applied to all
- Indexed in Google, Naver, KoreaScience

3. OAK Portal

- One-stop Gateway Service for distributed IRs plus OAK Central content
  - -articles, reports, dissertations, patents, multimedia content
- Global Dissemination of Domestic OA content thru integrated meta search
- OAI -PMH based
- Linking to global OA content providers
- Expanding Access Channels
  - -Naver, Google, OA service providers

OAK Portal
(http://oak.go.kr)



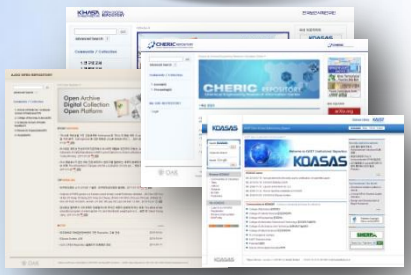
Mobile OAK Portal
(http://m.oak.go.kr)

3. OAK Portal

〈IR Content Archiving & Dissemination Process〉

OAK IRs

Archiving



Managing & Archiving of Institutional Content

Linking to external systems

Linking to internal systems

Report Article Patent Multimedia Others

200,000 digital items from 23 IRs

OAK Portal

Metadata Harvesting

Integrated Meta search for OA content

Metadata Harvesting
Integrated search
Classifying/Cleansing/
Duplicates checking/
Analyzing/Monitoring/Linking

National Meta Repository

Disseminating

Global Dissemination of Domestic OA Information

4. OAK Forum

- **Participants**
  - Scholars, Lawyer, DB Vendors, Funders, Government Officers, Librarians, Publisher People, Copyright Group, Society People
- **Topics Discussed**
  - NIH Public Access Policy
  - Public Access Policy for Public Research Outputs
  - Current Status of Korean Open Access and Its Future Value
  - How to Start Open Access for Domestic Journals?
  - Legal and Institutional Framework for Facilitating Knowledge Information Sharing
  - Civil Movement, Creative Commons for Facilitating Cultural Content Sharing
  - Cost Expenditures in Public Access Policy and Open Scholarly Journals
  - Library's View Point about Creative Resources utilizing Shared Literary Productions
  - Subsequent Process of Public Research Outputs
  - Institutionalization of Public Access Policy

5. OAK Policy Studies

- **"Study on Public Access Policy for Publicly Funded Research Outputs" done by Dr. J.S. Woo, Seoul National University, 2010**
  - Surveys on Domestic and Overseas Related Laws and Policies
  - Analysis on Stakeholder's Positions toward Public Access Policy
  - Proposal of a New Legislation of Free and Open Access to Publicly Funded Research Outputs

- **"Study on Regulations and Process for Public Access to Publicly Funded Research Outputs" done by Prof. Y.S. Kim, Joongang University**
  - Studies on 'Deposit Objects', Sites, Time, Format', 'Copyrights', 'Violating Sanctions' , etc.

Research Items	Detailed Topics	Description	Research Scope
Legislative Draft	Public Access Promotion Law	Solution Development against Issues collected from 'Policy Debates', 'Experts Discussions', 'Public Hearings'	Public Access Promotion Law
Policy Study	Amendment Drawing of Related Policy and Regulations of Government Ministries	Amendment Drafting of Detailed Regulations and Enforcement Ordinance	Concerned Government Ministries
	Amendment Drafting of Regulations and Enforcement Ordinance	Drafting of Public Access Policy Enforcement of Public funding Agencies	Funding Agencies of Government Ministries
Process Development	Development of Creation, Deposit, Circulation Process for Public Funded Research Outputs	• Development of Creation, Deposit, Circulation Process • Identification of Applicable Regulations and Enforcements to Process • Mandates, Copyright Management, Sanctions by Process	Process of Public Funded Research Outputs

6. OAK(Open Access Korea) Project

Major Accomplishments

1. To convert existing 25 Journals into OA ones by making 10,013 articles in the journals OA publications
2. To develop 23 Institutional Repositories and install in some selected universities(2), research institutes(16), Government Bodies(1) , public libraries(2) and university affiliated information centers(2)
3. To ingest 260,000 items of digital content and archive in the 23 repositories.
4. To develop a Digital Repository Portal service system (OAK Portal) that provides integrated search of metadata and gateway linking to the fulltext distributed in each repositories.
5. To develop a OAK Central system that provides archiving and global dissemination services of all OA journal literatures.
6. To develop **OAK Repository Open Source Package**
7. To Promote global dissemination of domestic OA content by means of OAI-PMH, OpenDOAR, DOAJ
8. To strongly influence domestic funding agencies(National Research Foundation(NRF) and Korean Federation of Science and Technology Societies(KOFST) to make out a new policy inducing existing fee-based or toll access journals to OA ones
9. To develop a workbench which facilitates semi-automatic converting PDF document to XML one
10. To develop a Korean localized IR Model
11. To construct language resources containing 600,000 entries with 1,510,000 terminologies in Korean, English, Japanese and Chinese, plus to develop a cross language search technology

OA Collaborations(Global)

1. SCOAP3 with CERN

- Participation in SCOAP3 OA Consortium(2010)
- EOI (2011) and MOU (Jan. 2014) with CERN signed
- Promotion Process
  - Promotions targeting for Existing Paper Journal Subscribers → Low Participations
  - Expanded Target Libraries by devising a SCOAP3-KESLI Combined Consortium Model → 60% of Total Allocated Fee covered
  - Remainder will be covered by KISTI

1. SCOAP3 with CERN

Development of SCOAP3-KESLI OA Consortium Model

Basic Model: SCOAP3
- Existing Subscription Fee to be converted into Consortium Joining Fee

→

Korean Model:
- Consortium Joining Fee: SCOAP3 + Article Submission Volume by KESLI Members

↓

- Participating Fee NOT higher than existing subscription fee
- Including non-subscribers but having access licenses among KESLI members to SCOAP3 Journals,
- Subscription Volume based Fee Model reflected by Article Submission Volume : <ranging 10% additions thru -25% deductions>

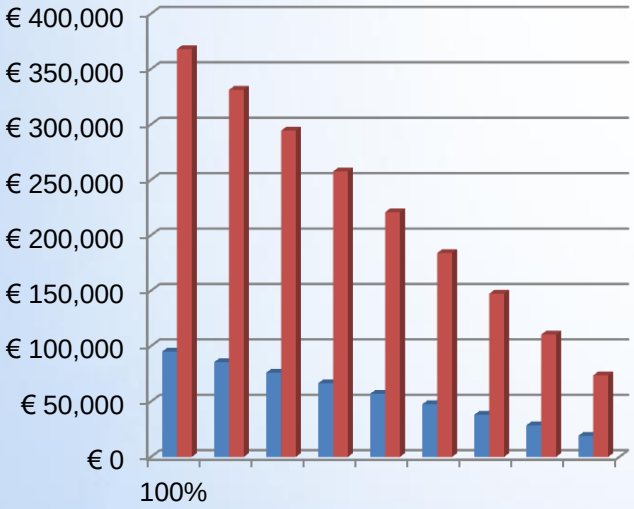
↓

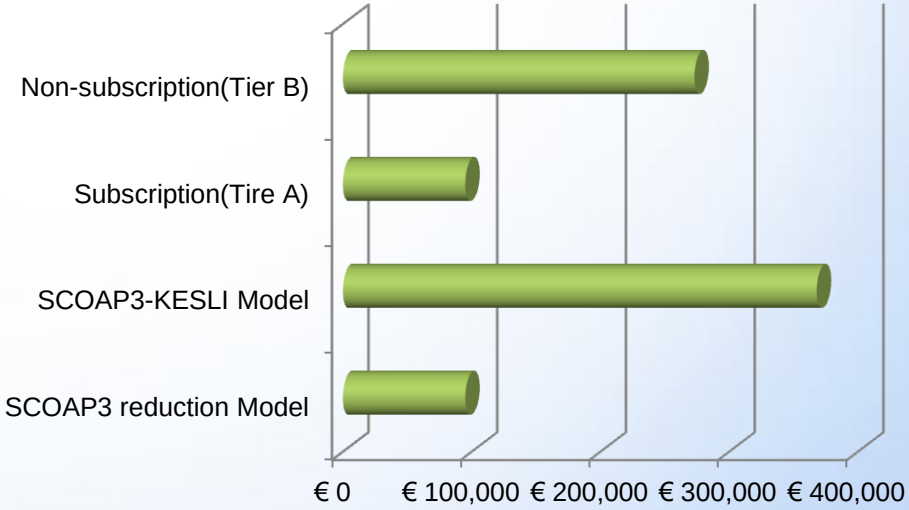
Final SCOAP3-KESLI OA Consortium Participating Fee Calculating Model

1. SCOAP3 with CERN

SCOAP3 reduction Model vs SCOAP3-KESLI Model

Participating rate	SCOAP3 reduction Model	SCOAP3-KESLI Model		
		Total	Subscribers	Non-subscribers
100%	€ 95,000	€ 368,000	€ 95,000	€ 273,000
90%	€ 85,500	€ 331,200	€ 85,500	€ 245,700
80%	€ 76,000	€ 294,400	€ 76,000	€ 218,400
70%	€ 66,500	€ 257,600	€ 66,500	€ 191,100
60%	€ 57,000	€ 220,800	€ 57,000	€ 163,800
50%	€ 47,500	€ 184,000	€ 47,500	€ 136,500
40%	€ 38,000	€ 147,200	€ 38,000	€ 109,200
30%	€ 28,500	€ 110,400	€ 28,500	€ 81,900
20%	€ 19,000	€ 73,600	€ 19,000	€ 54,600





2. WPRIM with WPRO

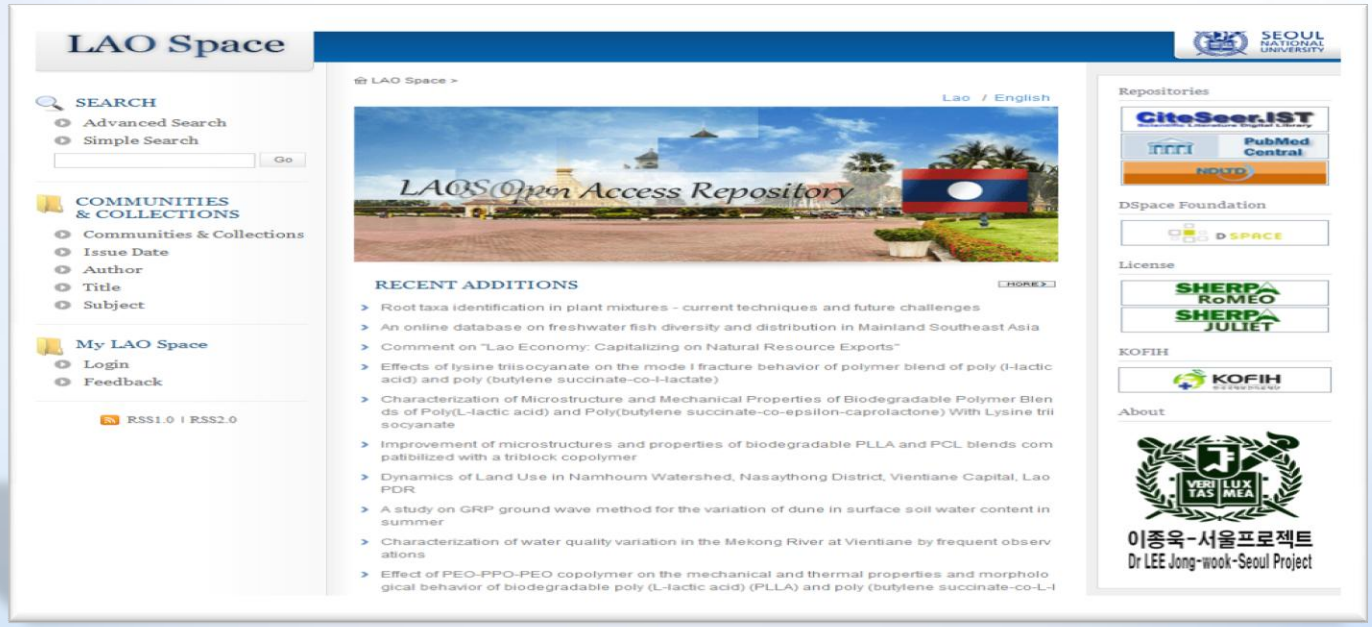
- An online index of medical and health journals published in Member States of the WHO Western Pacific Region to ensure global accessibility of medical and health research done in the Region
- Korean Association of Medical Journal Editors (KAMJE) offered its technologies(S/W) used for KoreaMed to build WPRIM in 2006
- 409,528 Articles on 473 journals were indexed as of June 2012 in collaboration with 12 member countries
- Over 80% of Korean Medical Journals were contributed
- KAMJE provides technical assistance to build a APAMED Central, a Digital Archive and Reference Linking Platform of Journals published in WPRO member countries

〈extracted from “OA Movement in Korea” by Dr. Jeong Wook Seo〉

3. Open Access Repository of LAOS

SNU College of Medicine Lee Jong Wook Seoul Project

- In the spirit of Dr. Lee Jong Wook's high achievements and efforts, Seoul National University College of Medicine provides educational support to Laos under the name of "Lee Jong Wook Seoul" project.
- an Open Access Repository of Laos (http://www.laospace.org) was built under the project
- Provided Cloud-based Hardware Infrastructure plus IR system for archiving and information services of the country's scholarly data in the field of Medicine and Health
- is planning to build 3 more Repositories in South East Asian Countries in 2014



4. Others

- **UNESCO**
  - UNESCO OA Program Experts Seminar: Opinions and Discussions of Korea about OA were sent thru UESCO Korea
  - UNESCO invited Korean OA Experts to their OA Meeting → Failed to attend the Meeting
- **OECD**
  - Dr. S.T. Kim of KISTI is acting as one of OECD OA Steering Committee Members
  - Open Science Steering Telephone Conference(Jan. 22, 2014)
- **Max-Planck**
  - OAK International Conference with invited Dr. Ralph Schimmer from Max-Planck
  - Studies on German OA Activities in collaboration with Max-Planck
  - "P-Cube", a Research Data Repository developed by KISTI after benchmarking a successful case of Max-Plank's Research Data related activities

OA Collaborations(Domestic)

1. MCST(Ministry of Culture, Sports, Tourism)

- KOGL(www.kogl.or.kr) : Korea Open Government License that enable the free distribution of public sector information

〈Icons〉

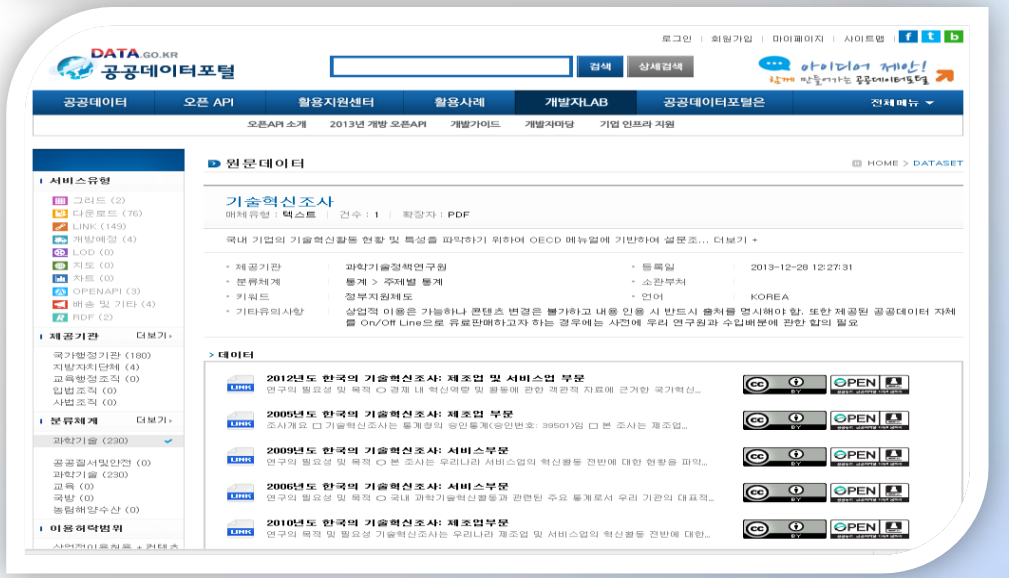
ICON	Right		
	Attribution	Non-Commercial	No Derivatives

〈Type of Licenses〉

Type 1		Attribution
Type 2		Attribution + Non-commercial
Type 3		Attribution + No Derivatives
Type 4		Attribution + Non-commercial + No Derivatives

2. MOSPA(Ministry of Safety and Public Administration)

- Open Government Data
  - Operated by NIA(National Information Agency)
  - participating institutions: 696
  - Datasets: 7,024
  - Open API: 629
  - Requests: 3,094(Jan 1~28)
  - Utilized: 1,597,110,000(2013)



3. MSIP(Ministry of Science and ICT Planning)

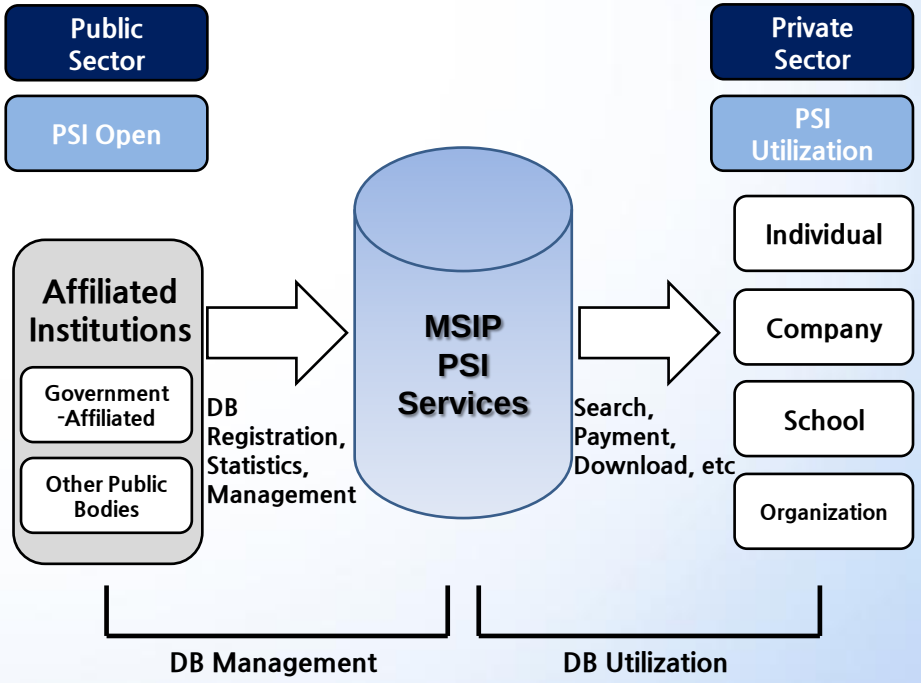
'Concept of MSIP PSI Service'

- Opening PSI held by public bodies under MSIP to the public thru Open Platform
- Providing various supporting activities in the stage of data processing, idea excavating thru data utilization, and developing business models, etc.
- Facilitating comprehensive supports in order for PSI to be extended to economic and social value creation processes

- All of 800 DBs surveyed are held by 44 institutions under MSIP
- Among them 535 DBs(66.9%) will be opened and utilized
- 20 business models developed
- KISTI will be acting as a facilitator for open government data services

✓ "Study on the PSI Service Development in the Science and ICT Field" Nov. 2013. KISTI

✓ Based on the "Law of PSI service and utilization promotion" established (Jul.30,2013) and enacted(Oct.31, 2013)



4. National Research Funders

- **NRF(National Research Foundation) & KOFST(Korea Federation of Science and Technology Societies)**
  - Established a new Policy to employ OA/FA as one of most outstanding Evaluation Criteria for Funding of Domestic Society Journals since 2012
  - Planning to build an OA Repository for funded Journals
  - Facing a Strong Opposition to OA encouraging Policy by Scholarly Information Providers in the Private Sector

*** Since 2012, funding of humanity & social science journals by NRF, science & technology by KOFST**

Conclusion

Status and Issues

Gold Road (OA Journals)

- Among 4,690 titles of Korean Journals about 1,100 titles are OA or FA Journals as of Today
- Understanding of OA is still low across the nation.
- Most of Libraries have enough understanding of OA journals, but less motivation to take related actions due to lack of financial support and top manager's low understanding except several libraries.
- Structurally difficult in promoting OA, since Confrontation of Positions are Sharp between Stakeholders in the Domestic Scholarly Communication System; authors, publishers, libraries, funders, aggregators, information service providers
- Private companies having business of scholarly journal services are strongly against OA movements in Korea. On the other hand, Public Sector and Libraries are a strong Supporters. Academic Societies split depending on their own situations
- Global collaborations for OA promotions are relatively Strong especially in the field of Medicine → 'WPRIM Initiative'

Status and Issues

Green Road (Digital Repository)

- Most of IRs are operating by the Libraries
- Institutional Written Mandates or Guidelines are NOT yet established for operations of IRs
- Few IRs are used for evaluating researchers by interlinking with performance management system: KOASAS of KAIST
- Total number of DRs including dCollections is around 260 across the country, but the number of Real Open DR conforming to global standards is less than 30. (dollection system is NOT compliant to global standards OAI-PMH)
- Attempts to share information with South East Asian Countries are being made by providing them with information infrastructure → 'LAO Space'

Status and Issues

Open Government Data

- Open Access and Utilization of Government Data are very Strongly Pushed by the Government under the newly established laws
- Copyrights and Intellectual Property Rights are NOT yet Clearly settled down
- Target users are mostly focused on Small and Medium sized companies
- Government 3.0 based PSI services is linked to the final goal of Creative Economy Fulfillment

Conclusion

- National Information Centers, Central Libraries and Medical Society are main leading groups of OA movements in Korea. They introduced OA and carried out OA-related projects to promote and practice OA activities in Korea
- KISTI is a leader of OA Movements by promoting Gold & Green Road, supporting Policy Development, establishing Communication Channels between Authors and Journal Editors and also implementing other OA related collaborations with domestic and global partners
- Researchers and authors from medicine and health are most advanced in adopting OA practices.
- Understanding of and Participating in OA movements also started to grow in the S&T sector together with researchers from Library and Information Science.
- Efforts for Legislation of Public Access Policy were vigorously made, but failed to produce tangible achievement due to;
  - Confrontation of Positions between Stakeholders
  - Low Understanding and Lack of Action Will of the Government Counterpart
  - Lack of Critical Mind of All Korean Communities
- OA Movements were concentrated only on Experts and Direct Related People → Public Relations and Advertisements for the General Public were almost NONE.

Thank you !