# Open Access in Japan – a multi-institutional perspective

Jos Baeten, Pascal Estraillier, Claude Kirchner, Alexandre Moatti, Laurent Romary

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## Acknowledgements

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## Executive summary


From 27 to 30 January, the French embassy organized an expert visit in Tokyo to gather in-depth information concerning the situation in Japan in the domain of open access to scientific results. The group of 5 experts from France and the Netherlands met with several major agencies (MEXT, JST, JSPS, NII) as well as research and library communities. A specific meeting was organized with Prof.Harayama, executive member of CSTI, to exchange strategic options concerning open access in Japan and France.

The present report reflects the very rich interactions that occurred over a week and which could summarise as follows:

- Open access benefits from a strong awareness in Japan at institutional, academic and library level;
- The recent years have seen several developments in setting up infrastructures that are likely to favour the wider development of a national open access policy in Japan, in particular in the domains of publication repositories and editorial platforms;
- The evolution in publication costs have accelerated the open access agenda in Japan with the prospect of a national policy being issued in the period following our visit[1];
- There are several opportunities for close collaborations between European and Japanese institutions both at political and technical levels.


[1] See https://aaas.confex.com/aaas/2016/webprogram/Paper16940.html and the reports cited in the bibliography

## Scientific information and open access – an introduction and an overview of the context in France and Europe

The wide dissemination of research results is an essential component of a prosperous development of science and technology. The legacy of the scientific publishing landscape, created in the print era, as well as the prospect that the wide deployment of information technologies may lead to a simplified dissemination of research assets, have made necessary for researchers, libraries and all institutions involved in higher education and research to contribute to an in-depth evolution of the scientific communication processes.

Without drawing a complete history of the open access movement here, we can identify some major milestones, which have lead to the current situation:

- Dramatic increase in journal subscription costs in the 90's (so called "serial crisis");
- Setting of the first publication repositories with arXiv in 1994, following several year of pioneering dissemination of digital papers on ftp sites, mailing lists etc.;
- Emergence of the Open Access movement stating that scientific content, seen as a public good, should be freely accessible and re-used. We can mention here the Berlin declaration issued in 2004 and signed by many scientific organisations worldwide[2]:
- Further deployment of institutional, thematic or national repositories worldwide (see Romary &Armbruster, 2006) contributing to the expansion so-called *green* Open Access[3]:
- Rise of new publishing models based on the payment by authors of an Article Processing Charge (APC) in order to make the paper available online at the time of publication (part of what is named *gold* Open Access[4]).

Behind the notion of public good, we can also mention the importance of scientific, institutional or national sovereignty, whereby publicly funded research should lead to productions that remain within the remits of their producers. This has direct consequences at various levels: preservation of authors' copyright, setting up reliable infrastructures, defining publication cots in accordance to clear services provided by third parties (as opposed to the current non-competitive publication market), with the objective of increasing the capacity of public actor carry out their assessment or strategic planning duties in full independence[5].

In Europe, despite isolated attempts to favour the publishing business[6], green open access has taken up strongly and in particular France has developed a national

[2] http://openaccess.mpg.de/Berlin-Declaration

[3] green open access can be defined as the free dissemination of scholarly papers by *authors* themselves

[4] green open access can be defined as the free dissemination of scholarly papers by the publishing platforms where the article has been submitted.

[5] for instance without relying on the sole Journal Impact Factor

[6] See for instance the infelicitous proposal in:

publication repository platform: HAL[7].At national level, the French Minister for Research has issued in January 2013 a strong statement on open access to scholarly results, where the archiving of publications in open access repositories, and in particular the HAL national platform, has been given priority, in complement to the definition of new viable editorial and business model for scientific publishing.

Some institutions such as Inria or CWI have managed to go even further by mandating researchers to deposit publications within their repositories. Such mandates are usually linked to annual assessment, whereby the papers in the repositories are taken as the sole source for reporting by researchers or research teams.

Initiatives are also taking place to develop new publishing models that decouple the notion of publication, understood as the dissemination of the content publicly online, from the peer-reviewing process. We can mention here the Episciences initiative (See Berthaud et al. 2014) in France that offers an environment for implementing so-called overlay journals on top of existing publication repositories.

Open access is also one element in global reshaping of the dissemination of research results from a wider perceptive. The issue has for instance been high up on the political agenda of the G8, with its *Open Data charter*[8], and the underlying copyright issues (re-usability, for instance for text and data mining) is an essential component of the European Union copyright reform[9].

## Main objectives

The main objectives for the European delegation during this series of meeting were the following ones:

- Understand the situation of open access in Japan, in particular to identify factors for change in this domain;
- Compare the main issues in Japan with the political and technical settings in France and at CWI;
- Identify some possible collaboration themes that would allow our countries to develop better and stronger open access policies in the future.

## Overview of meetings and discussion points

In order to lighten the reading of this report, all participant lists have been moved at the end of this report as annexes.

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http://pubman.mpdl.mpg.de/pubman/faces/viewItemOverviewPage.jsp?itemId=escidoc:2148961

[7] https://hal.archives-ouvertes.fr

[8] https://www.gov.uk/government/publications/open-data-charter/g8-open-data-charter-and-technical-annex

[9]From Julia Reda's report (Member of the EuorpeanParliament in charge of the Copyright reform) : https://juliareda.eu/copyright-evaluation-report-explained/#tdm

## Contextual information

The Japanese academic landscape is based upon a large group of 774 universities (86 national universities, 83 public universities and a majority of 605 private universities). At a political level, three main institutions are in charge of the higher education and research policies: MEXT: Ministry of Education, Culture, Sports, Science and Technology) and two funding agencies: JST: Japan Science and Technology Agency and JSPS: Japan Society for the Promotion of Science.

The stay was organised in two complementary types of meetings:

- series of discussions with institutional actors, among which Prof.Harayama, the above-mentioned institutions and the NII management;
- workshops dedicated to specific communities of interest and stakeholders.

## CSTI (Council for Science, Technology and Innovation)

Yuko Harayama is an Executive Member of the CSTI at the Cabinet Office. The CSTI has been seminal in producing an important report in March 2015 aiming at defining a national policy in the domain of open access to scientific result. In this context our delegation had the opportunity to exchange some core ideas with Prof.Harayama. The main topics addressed during this meeting were the following one:

- Importance of scientific sovereignty and to define ways of mastering the dissemination of scholarly result;
- The possibility to go towards a more pro-active policy in the domain of scientific article deposit in publication repositories, taking the examples of the ambitious deposit mandate policies of Inria and CWI;
- The necessity to experiment new scientific publishing models based on public platforms;
- International collaboration between Japan and Europe in the above-mentioned themes.

## MEXT (Ministry of Education, Culture, Sports, Science and Technology)

“MEXT has started to work with JST to introduce mandatory rule for scientists to publish their papers and data sets open accessible attached to public funds. “

In particular, MEXT originated an open access mandate for all PhD theses in Japan in March 2013 through the institutional repository of the PhD awarding institution.

From an infrastructural point of view, MEXT finances the technical support provided by NII concerning scientific publication platform and in particular the work carried out on journal management environments and publication repositories.

## JSPS (Japan Society for the Promotion of Science)

There are 3 funding agencies in total in Japan, two under the auspices of the Ministry of Higher Education and Research (MEXT): JSPS and JST, one under the auspices of the Ministry of Industry (MITI): NEDO. Among the three the JSPS, established in 1932, represents the biggest one with a budget of around 2 billion Euros per year.

The meeting took place in presence of MakotoAsashima, executive director of JSPS, and was the opportunity to have an in-depth discussion on open access issues in relation to the forthcoming report by CISTI due in March 2015.

In the domain of scientific information and open access, the JSPS has had several programs to encourage the move of scholarly society journals from print to electronic, as well as specific support for gold open access publication. It should be noted that current plans do not integrate any specific support for green open access.

A specific discussion took place concerning the opportunity to better coordinate open access issues within the GRC (Global Research Council). G8, ANR

## JST (Japan Science and Technology Agency)

JST provided us a series of questions that served as a basis of discussions and allowed us to better understand their current topics of interest. We provide specific details about the corresponding interaction.

A specific debate took place during the meeting on the compatibility between the development of open access journal and the role of depositing papers in publication repositories. A consensus actually emerged to understand that the necessity of mandating deposit in public repositories remains when papers are being published within open access journals, in order to ensure that a reference corpus of scientific publications be maintained by governmental institutions. The debate also addressed to related aspects:

- The role of publication repositories for the early (pre-peer review) dissemination of scholarly manuscripts, with the possibility of both getting quick and efficient community feedback on scientific results, but also to take precedence since such manuscripts can serve, for instance, as prior art during patent examination. In the case of papers that are not further published (or refused) in traditional journals, it appears that keeping these records are essential to maintain a rich scholarly background for future research;
- The danger of (probably ephemeral) private platforms such as Academia or Research Gate offering hosting services for scholarly papers and which bring in the risk of even more fragmentation of our scientific assets. For countries like Japan (with Jairo cloud) or France (with HAL) where there exist a national publication repository strategy, a stronger information campaign should deter scientists from using such platforms to record their productions.

JST expressed their interest in stronger collaboration schemes between Japan and Europe on publication platforms and supported the idea that specific links with the developments carried out within NII should be established.

## NII (National Institute of Informatics)

Beyond its core mission as a research institution in the domain of computer science (with 80 permanent researchers), NII plays a central role in the Japanese scientific information landscape since it is in charge of implementing and operating the main national information infrastructures for universities in Japan. If we were to compare to the French situation, it groups together missions that are spread across ABES (central catalogue), CCSD (national repository HAL), Persée (digitisation of scholarly journals in human sciences) and INIST (provision of subscribed content).

An early program initiated between 2004 and 2007 provided initial support for the implementation of institutional repositories within up to 70 universities:

- NII-ELS is a platform dedicated to the online delivery of digitized legacy journals from scholarly societies in Japan (thus close to the scope of Persée). It hosts the content of 109 journals but does not really offer the service of a publication platform. It seems the content is about to move to J-stage;
- JAIRO Cloud is a centralized digital research object repository, allowing not only universities to implement publication portals within it, but also offering research data archiving and publication facilities.

Besides, NII provides targeted services concerning publishers' copyright policies (SCPL – Society Copyright Policies in Japan, similar to SHERPA/ROMEO) or assessment of repository downloads (ROAT – Repository Output Assessment Tool).

We consider NII as a model for future scientific information infrastructure where technical support is strongly coupled with research activities (for instance in the domain of text and data mining or visualisation).

## Library and information science workshop

The workshop provided a comprehensive overview of the situation in various (public and private) universities in Japan as well as an overview of the current organisational and technical issues at a national level.

There are as a whole 1486 University libraries (289 national, 129 public and 1068 private) in the academic sector. From an organisational point of view, several consortia are relevant for the management of scientific information in Japanese universities:

- JCCUL, Japanese Coordinating Committee for University Libraries. It has signed in 2010 an agreement with NII in scientific information for the higher academic sector;
- JUSTICE (Japan Alliance of University Library Consortia for E-Resources) is the equivalent organisation to Couperin[10] in France in that it is in charge of the negotiations with publishers, with the difference that its activities do not comprise the setting up of centralised subscription consortia ("groupement de

[10] http://www.couperin.org

commande" for Couperin). JUSTICE currently has a membership of 516 libraries in close collaboration with the NII;

- DRF (Digital Repository Federation) groups together institutional repository initiatives (150 members). DRF is a member organisation to COAR (Confederation of Open Access Repositories). This structure seems to evolve into the Institutional Repository Promotion Committee, set in 2013 between NII and university libraries;
- Finally, SCREAL Standing committee for research in academic libraries.

The Japanese libraries have altogether the quite large budget of 21 831 million Yens dedicated to subscriptions with a total number of 4970 journal titles. The recent drop of the Yen exchange rate, coupled with an increased VAT applied to subscriptions and a global reduction in University library budget dramatically impacts on the capacity to keep to this budget. The current consequence is a tendency to abandon the big deal model in favour of the identification of relevant title portfolio within each university.

The institutional repository (IR) landscape was until now extremely fragmented with a large network of 370 university repositories that has steadily (hita-hita, cf. Tsuchide et alii, 2013) increased over the years. They are mainly operated by the university libraries and comprise an impressive number of items (1 400 000) as of 2014. NII has played strong role in this development by first supporting several university repository projects and recently by offering a centralised repository service (JAIRO-cloud) where Universities can develop their own portal, in a setting which is quite equivalent with what we have in France with HAL[11].

Most of the institutional repositories have a "everything welcome policy" (for instance in Chiba), whereby the aim of the platform is to host all types of scholarly productions, comprising reports, grey literature at large, theses, wide public articles, posters etc. in complement to research article in the narrow sense of the term.

University bulletins (or *Kiyo*), mainly in the social and human sciences domain, represent a majority of the content of these institutional repositories[12]. This reflects the fact that IRs are not seen as a tool for providing open access to otherwise published material but more of a document repository for locally generated documents (texts or data). The deposit mandate on PhD thesis can be also seen from this perspective.

Universities begin to have difficulties in keeping their maintenance budget for their local institutional repositories, which may lead to a step-by-step switch to JAIRO. Beyond the budget aspects we see numerous advantages to this, based on our experience with HAL: coherent meta-data description, connection to national authority files, quicker take up of new technologies (e.g. visualisation and data mining) and better connection with international initiatives (cf. Romary and Armbruster, 2010; https://hal.inria.fr/hal-00399881).

[11] As opposed to France where major universities have chosen to have their IR portal developed within HAL, JAIRO Cloud initially took up within smaller universities which could not afford deploying their own IR environment.

[12]Kiyos are also disseminated using the CiNii service from NII (http://ci.nii.ac.jp)

As a general conclusion, we have observed a strong independence of each university, with in general a low political support to institutional repositories at University management level. Institutional repository contents are also very heterogeneous, and it is hardly foreseeable that Universities will issue OA mandates in the future, not even strong requirements. Of course the national request made for PhD theses ensures at least that most of them are available in the repositories.

## Researchers' workshop

Several projects and institutions were presented, and a broad exchange of views took place about these projects, that were either in the field of exact sciences as well as human sciences (in particular: digital humanities). Among the latter, we can cite the projects of the Japanese Association of Indian and Buddhist Studies[13], the Japanese Association for Digital Humanities (www.jadh.org), the Japanese Association for Religious Studies (www.jpars.org), or the Research Institute for Sustainable Humanosphere, Kyoto University (http://www.rish.kyoto-u.ac.jp/), or the Digital Silk Road Project, one of the pioneers (http://dsr.nii.ac.jp , since 2001).

The National Diet Library, responsible in Japan for legal deposit of books and reviews, presented also its projects; in France, it is not the Diet Library but the BibliothèqueNationale de France which is in charge of legal deposit[14]. The questions of legal deposit of the Web sites (that is implemented in France by a law of 2007), as well as the legal deposit under electronic format (which is a different question, not available in France) have been discussed.

The question of research data (scientific 'big data') has also been raised; the Japanese delegation gave the interesting example of the preservation of records for unique scientific phenomenon, like eclipses or big earthquakes. This is part of Japanese implication in the international Research Data Alliance (www.rd-alliance.org).Japan Science and Technology Agency (JST) curates data centres in several scientific realms, dedicated to this mission of research data preservation.

Several points arose during the discussion between the French delegation and the Japanese institutes, among which:

- The possibility of having digital humanities projects better known by a larger public, for example through Wikipedia (systematically indexing these projects on the related Wikipedia pages; in the other way, also releasing iconography from research institutes for Wikipedia pages).
- The possibility of associating a larger public to some digital projects: for example transcription of historical manuscripts by internet users; or "participative science" (in botanic, in astronomy, etc.) where scientific data coming from non-researchers is aggregated to complement and enrich research data as well as programs.

[13] www.jaibs.jp

[14] Seehttp://www.bnf.fr/fr/professionnels/depot_legal/a.dl_livres_mod.html

## Contextual analysis

For many years, the favourable exchange rate between the Yen and the Dollar, in which most subscription contracts were set up, has attenuated the effects of the serial crisis in Japan and created a feeling of wealth with regards the private scholarly publishing sector. This has resulted in the negotiation of numerous big deals between Japan academia and publishers and also a particularly strong dedication to the newly introduced Gold open access model, as compared to what has been experienced in Europe. The recent devaluation of the Yen, coupled with an increase of the VAT rate on foreign products has completely changed the perspective on publishing cost and the actual role of private publishing in the dissemination of scientific information.

The Tōhoku earthquake and tsunami in 2011 has also had an important impact on the role of the government and governmental agencies with regards scientific research. Whereas most of the national institutes for instance were quite autonomous in defining their research priorities, the dramatic consequences of the tsunami has awaken the Japanese authorities to the necessity to define strong research priorities in such domains as energy, environment or information technology. This in turn has created a favourable background for a stronger national policy in the scientific information domain.

From an academic point of view, the development of scientific information policies in Japan have been subordinated to three main important factors:

- The fragmentation of the university landscape with 774 universities as a whole and the importance of the private sector (605 private universities as opposed to 86 national and 83 public universities);
- The central role of scientific societies, which have maintained a specific portfolio of scientific journals. This has induced specific initiatives towards the corresponding publishing sector, for instance in terms of publication platforms;
- A strong autonomy of Japanese universities, and within them of Professors, which lies at the root of the current fragmentation of the publication repository landscape so far, but also slowed down various initiatives towards more concerted actions in the open access domain.

In the recent years, Japan has seen a dramatic growth in the number of open access repositories within its universities and research organisations. With 388 repositories, which reflect the fragmented academic landscape in Japan, there are currently great discrepancies in actual coverage, technical developments and prospect for sustainability across these platforms[15]. Another important issue is the reduced coverage of these repositories in terms of real scientific publications (around 15% of journal[16] articles). Kiyos (departmental bulletins) represent more than a half of the content, with also an increasing importance of PhD theses (4,4%) thanks to the national deposit mandate. The PhD mandate, which explicitly refers to the IR of the

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16 In universities such as KeiO (KOARA repository) with a specific policy, the rate can reach 40%, with a clear impact on visibility.

awarding institution has also contributed to the fragmentation of the landscape: no specific national service has been set in place, as is the case in France with STAR and TEL[17], and the European portal DART[18].

The relation to commercial publishers is very specific in Japan with a very high budget that seems to reflect that commercial publishers have tend to see Japan as a "Poule aux oeufsd'or"[19]: 260 M€ (to compare to the subscription budget in France: 80 M€), which has also been amplified by a strong Gold open access policy. One factor here is the central role for national journals with two additional issues:

- The specific language issue, whereby gold open access and often associated with the need of advanced copy-editing in English;
- The absence of a real policy for new quality assessment factors, with the journal citation index remaining a major reference in Japan;

Still, there are several positive factors that are likely to help Japan taking a leading role in the open access movement:

- The dramatic growth of open access repositories in Japan in the recent year, despite the fragmentation effect we have already mentioned created a real culture of repository management in Japan as well as a factor for higher collaboration between Japanese university libraries;
- The centralisation role of NII and in particular the recent deployment of JAIRO cloud[20]or the provision of a national journal management platform is likely to create in the very close future a very strong and coherent infrastructure at the service of forthcoming open access policies[21];
- Mandate (PhD) MEXT has started to work with JST to introduce mandatory rule for scientists to publish their papers and data sets open accessible attached to public funds. [Source MT]
- The strong influence of library networks (cf. the pioneering role of Universities such as Chiba)

## Conclusions –Perspectives

Over the week's discussions that took place between Japanese and European colleagues, it has become clear that there is a need to a closer collaboration between us all in order to go towards a more ambitious scientific information policy that would favour the open access dissemination of both publications and data. In particular, very similar views have been shared concerning the need to take over again the sovereignty over scientific information, and consequently identify public policies and

[17] https://tel.archives-ouvertes.fr/STAR
[18] http://www.dart-europe.eu
[19]ガチョウと黄金の卵
[20] JAIRO cloud now hosts 60% of all IR in Japan, in particular from smaller universities with limited in-house implementation resources.
[21] A typical example is Chiba University, a precursor in the domain of setting up an institutional repository and associated overlay services, which now experimenting a switch to JAIRO cloud.

infrastructures that would ensure that the scientific common good is not exclusively given away to the private sector. The objective is both to be able to provide a better dissemination of scientific results, but also to offer the possibility to implement new services (indicators, data mining) based upon a comprehensive pool of scientific content.

Several concrete domains have been identified, which could be the basis of future collaborations:

- Sharing our principles and the way we communicate towards scientific communities. In particular, we need to have a better coordination of our information concerning the risks of gold open access;
- Compare our technical developments. It has become clear for instance that NII and Inria have a very similar role in their being at the intersection of computer science research and scientific information services development.
- Creating better communication channels between our institutions and in particular our library networks (Couperin in France, JUSTICE in Japan) about the various negotiations and agreements that are taking place with private publishers, concerning: subscription deals, gold open access deals and specific licencing agreements (re-use and data mining). This could lead to the identification of bilateral coordination when facing major hurdles in future negotiations;
- Developing strategies to strengthen the role of digital librarians and data scientist with the perspective to increase the sustainability and re-use of the digital scientific content that will be produced in the future. The importance of such new professional profiles has been identified by both sides as crucial to scientific information policies in the digital world;
- Coordinate the evolution of the copyright legal landscape in order to favour access and re-use of scientific content;

There are clearly lessons to learn for the French scholarly landscape. The Japanese example tells us in particular the danger of having a fragmented publication repository landscape and French Universities such as Strasbourg or Bordeaux should look at the consequences of developing and maintain their own platforms. From a political point of view, the deposit mandates of Inria and CWI have clearly been seen as examples that should followed step by step (hita-hita again…) by various university libraries.

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## Annexes

### Key figures

| | France | Japon | Source |
|---|---|---|---|
| **Population (in thousands)** | **65 433** | **127 547** | OCDE 2012 |
| **GDP (in millions $)** | **2 612 878** | **5 961 066** | World Bank 2012 |
| **GDP world ranking** | **6th** | **3th** | World Bank 2012 |
| **National expenditure on R&D (million current PPP $)** | **54 680** | **151 837** | OCDE 2012 |
| **Share of GDP dedicated to research** | **2,26%** | **3,34%** | OCDE 2012 |
| **Nb of researchers (FTE)** | **249 086** | **656 651** | OCDE 2011 |
| **Nb of researchers in proportion to population** | **0,38%** | **0,51%** | OCDE 2011 |
| **International ranking for publications** | **6th** | **5th** | OST 2011 |
| **Share of worldwide publications** | **3,6%** | **5,1%** | OST 2011 |
| **Ranking for patenting under the PCT Treaty** | **6** | **2** | OCDE 2012 |

| | | | |
|---|---|---|---|
| **Thomson Reuters 2014 Top 100 global Innovators** | **#3** | **#2** | |

## Participants to the expert group

**Jos Baeten**graduated in mathematical logic at Utrecht University in 1978. He has an M.Sc. (1983) and a Ph.D. (1985) in mathematics of the University of Minnesota (USA). He worked at the Technical University of Delft (1983-1984), at the Centre for Mathematics and Computer Science (CWI) in Amsterdam (1984-1985 and 1989-1991) and at the University of Amsterdam (1985-1991), before getting appointed in 1991 as full professor of computer science at the TechnischeUniversiteit Eindhoven (TU/e).

As of October 2011, he is general director of CWI in Amsterdam, keeping a part-time professorship at TU/e. As of January 2015, this part-time professorship is replaced by one at the Institute of Logic, Language and Computation of the University of Amsterdam.

He is well-known as a researcher in formal methods, in particular in process algebra and its applications. To date, he supervised 29 Ph.D. degrees. He was scientific director of the national research school Institute for Programming research and Algorithmics (1996-2004), dean of the department of Mathematics and Computer Science of the TU/e (1996-1999 and 2002-2004), and initiated the Embedded Systems Institute in Eindhoven (1996). He chairs the steering committee of the CONCUR conferences and is a member of the KHMW (Royal Holland Society of Arts and Humanities).

**Pascal Estraillier**isscientificadviser in the directorate "National Management of Research and Innovation" at the French Ministry of Research, in charge of ICT area. More particularly in charge fields of the systems, networks and softwares :

- Contribution to the definition of the National Strategy of Search and Innovation (SNRI) whichlays the strategicorganizations of the government as regards Research

- Regular Member, representing the Ministryat the boards of directors of the National Geographic Institute (IGN) and the Institute Telecom, steeringcommittees of programs of the ANR National Researche Agency.

- Instruction of files within the framework of the 'Investissements d'avenir' french programs.

He isalso a full professorat the Computer Sciences department and the researchLaboratory L3i "Informatics, Image, Interactions" at the University of La Rochelle.

He wasVice-President of the University of La Rochelle, in charge of development and industrialrelationships. He headed the ResearchLaboratory L3i "Informatics, Image, Interactions".

At the national level,  heis the scientific manager of the consortium ERT « Digital interactivity ». He wasco-founder of the National School of VideoGames and Digital Interactive Medias (ENJMIN) whichis the first French Educational program on Gamesat Master Level.

**Claude Kirchner** is advisor of Inria's President since October 2014 and has been inria's CEO for science and technology from September 2010 to October 2014.

He has been high school mathematics teacher, associate professor in computer science, research scientist at the French National Centre for Scientific Research, and, since 1988, has been a senior researcher at Inria. His scientific interests and contributions focus on logic and semantic foundations for the design and implementation of robust, reliable and secure systems. He contributed to the emergence of deduction modulo concepts and of the rewriting calculus. Starting in 1992, he created and directed the Protheo Inria project-team in Nancy. He was awarded the 2002 Academy of Sciences grand prize for the Franco-Chinese cultural foundation. He has chaired the scientific and evaluation committees of the programs of the French research ministry and of ANR (the French National Research Agency) in security and informatics and has been the first director of the Inria Bordeaux – Sud-Ouest research center from 2008 to 2010.

Recently Claude Kirchner has also been involved in the set-up of the FUN (France UniversitéNumérique) French gouvernemental MOOC initiative and was an organizer of the DagstuhlPerpective Workshop on MOOCs (http://www.dagstuhl.de). He is member of numerous scientific advisory committees, member of the committee for ethical research in digital science in France (CERNA) and president of Inria's Institutional Review Board (COERLE), président of the CCSD (Centre pour la Communication ScientifiqueDirecte) steering committee.

**AlexandreMoatti**, 55 ans, estingénieur en chef des Mines (Conseilgénéral de l'économie, de l'industrie et des technologies, ministère de l'Industrie) et parallèlementchercheurassocié à l'université Paris-VII-Diderot (laboratoired'histoire des sciences et des techniques sphere UMR 7219). Il estaussiconcepteur et directeur (depuis 2008) de la bibliothèquenumériqued'histoire des sciences *BibNum* (MESR) www.bibnum.education.fr.

Actifdans le domaine des humanitésnumériques (*digital humanities*), il a étéprésident du Conseilscientifique du TGE-Adonis (CNRS) de 2010 à 2012, co-auteur d'un rapport surl'informationscientifique et technique (rapport de la commission Salençon, MESR, 2008), co-auteur d'un rapport d'audit CNRS sur la première mouture du TGE-Adonis (2006), ainsiqueSecrétairegénéral du Comité de pilotage 'Bibliothèquenumériqueeuropéenne' (ministère de la Culture, 2005-2006). Il est auteur de plusieurs articles, d'un blog et d'un livre à paraîtresur les humanitésnumériques et les usages de l'Internet de la connaissance.

**Laurent Romary**is Directeur de Recherche at Inria, France and directorgeneral of DARIAH. He received a PhDdegree in computationallinguistics in 1989 and his Habilitation in 1999. He carries out research on the modelling of semi-structured documents, with a specificemphasis on texts and linguisticresources. He has coordinatedvarious EU project, in particular MLIS/DHYDRO, IST/MIAMM and

eContent/Liricsprojects. He has been active in standardisation activitieswith ISO, as chair of committee ISO/TC 37/SC 4 and the TextEncoding Initiative chairing the technicalcouncil in 2008- 2011). He has been involved in the definition of the scientific information policy of CNRS (2005-2006), the Max-Planck Digital Library (sept. 2006-dec. 2008) and Inria.

Publication list : https://cv.archives-ouvertes.fr/laurentromary

## Meeting Open Access with JST (Japan Science and Technplogy Agency)

Date : January 29, 2015, Time : 10:00-12:00

Venue : French Embassy

Participants from JST :

Mitsuru MIZUNO, Director, Department of Databases for Information and Knowledge Infrastructure

水野 充 知識基盤情報部 部長

Naoyuki TSUNEMATSU, Principal Researcher, Department of Information Planning

恒松 直幸 情報企画部 上席主任調査員

Wataru ODASHIMA, Senior Researcher, Department of Databases for Information and Knowledge Infrastructure

小田島 亙 知識基盤情報部 主任調査員

Akira NISHI, Chief, Department of Information Planning

西 亮 情報企画部 主査

Takayuki HASEGAWA, Office of International Strategy

長谷川 貴之 国際戦略室

## Meeting with NII

Prof.Masaru Kitsuragawa, director of the NII and the president of the IPSJ (Information Processing Society in Japan)
Jun Adachi, Deputy Director General,
Director, Cyber Science Infrastructure Development Department
Hideaki Takeda, Professor, Principles of Informatics Research Division
KazutsunaYamaji, Associate Professor, Digital Content and Media Sciences Research Div.
Research and Development Center for Academic Networks

IkkiOhmukai, Associate Professor, Digital Content and Media Sciences Research Div.
Director of Content System Development Office
Koichi Ojiro, Deputy Director, Cyber Science infrastructure Development Department
YukinoAihara, Director, Scholarly and Academic Information Division
Nanako Takahashi, Assistant Director, Scholarly and Academic Information Division
MutsumiHosaka, Library Liaison Cooperation Office (JUSTICE)

## Library and information science workshop

### Participants

- Mr. Shinya Kato, Deputy Director, University of Tsukuba Library; Chairperson of the Institutional Repositories Promotion Committee;
- Mr. MasamitsuKuriyama, Professor, Library and Academic Information Center, Tokyo Metropolitan University;
- Ms. Kazuko Matsumoto, Chief Librarian, Information and Media Center for Science and Technology, Keio University;
- Mr. Taro Misumi, Chiba University Library;
- Ms. YuiNishizono, Kagoshima University Library;
- Mr. Sho Sato, Assistant Professor, Faculty of Social Studies, Doshisha University;
- Mr. Yoshinori Sato, Professor, Faculty of Letters, Tohoku Gakuin University;
- Mr. Kenichi Tomita, General Secretary, Hokkaido University Library;
- Ms. IkukoTsuchide, Osaka University Library;
- Ms. Keiko Yokoi, Tokyo Institute of Technology Library.

Observers:

- Ms. MikikoTanifuji, NIMS: National Institute for Materials Science;
- Mr. SyunTutiya, NIAD-UE: National Institution for Academic Degrees and University Evaluation.

### Program

Open Access in Japan: Current condition and vision for the future.

- Shinya Kato, University of Tsukuba. "Japanese Academic Libraries: Some Basic Facts and the Structure."
- MasamitsuKuriyama, Tokyo Metropolitan University. "Institutional Repositories in Japan."
- Yoshinori Sato, Tohoku Gakuin University. "Acceptance and Attitude of Japanese Researchers to Open Access."

Case studies of Open Access Practices in Japanese Academic Libraries.

- Kenichi Tomita, Hokkaido University;
- Taro Misumi, Chiba University;

- Kazuko Matsumoto, Keio University.

## Research workshop

### Participants

Masanori Arita (National Institute of Genetics)
Hidemasa Bono (Database Center for Life Science)
Miho Funamori (The University of Tokyo)
Makoto Goto (National Institutes for the Humanities)
Kazuhiro Hayashi (National Institute of Science and Technology Policy)
Takanori Kawashima (National Diet Library)
AsanobuKitamoto (National Institute of Informatics)
Yasuhiro Murayama (National Institute of Information and Communications Technology)
Kiyonori Nagasaki (International Institute for Digital Humanities)

### Minutes

**13:30 Introduction** by Laurent Romary, INRIA

**13:50-15:30 Open access of academic publication**

☆ *Situation of journals in life sciences in Asia* (Masanori Arita, Kazuhiro Hayashi) 10 min

- KAKENHI to promote OA (since 2013), publication funding of 20,000,000 yen/5 years (not well known)
- In neighboring Asian countries, Gold OA and new publication models are more active.
- APC from 100 USD to 6,000 USD, complementary language editing
- Many academic societies in Japan (over 1800), hampering the scale-merit
- Most of J-STAGE journals promote free access only (no CC license)
- Some societies (eg physics) try promoting OA.
- Many journals rely on a legacy but somewhat robust business model with membership fee, this have been an inertia not to move to OA
- Many learned societies have cooperated with global commercial publishers, some get royalty, some have to pay money to collaborated with commercial publishers, depending on the quality of journals
- Unfortunately we do not have global STM publishing industry in Japan

☆ *Situation of journals in humanities* (Kiyonori Nagasaki)

- NII-ELS (paper-scanned 109 journals) will move to J-STAGE.
- Membership fee is not enough to support journals, but members expect to receive printed ones.
- No online submission / review system in Japanese OA supports, but only publication.
- Elderly people are afraid of cyberspace, do not wish to digitize past publications.
- No strong tie with libraries.
- Digital publishing often adopts CC-BY-NC-ND.
- Many societies do not want OA and the budget is not enough.
- 4 cases of OA journals in humanities were reported.

☆ *Status quo and Issues of Open Access of Academic Publications at U Tokyo* (Miho Funamori)

OA of PhD dissertation:

- PhD dissertations went mandatory OA by Ministry of Education (MEXT) since FY 2013 (announced 2013/3)
- 12000 PhD dissertations in Japan, 10% from U Tokyo (2012)
- Making PhD dissertation OA mandatory caused a lot of work for less equipped staff and librarians
- Faculty members feared that the publisher won't publish the work if prior publication. Also, they feared they will lose international competition if they open access PhD dissertations.

OA of academic articles

- OA is not well known inside Japan but submission to OA-journals is high compared to other developed countries
- Some domestic publications, including English-based and Japanese-based journals, show high OA rate.
- Publication in English is important to disseminate science in Japan, and it became a strategy of Japanese government to disseminate the journals OA
- 70% of U Tokyo institutional repository is "bulletin papers" (Kiyou).

OA of other academic works

- Open Data is not well known either. Moocs are not much popular.

Future steps

- Need to raise awareness of OA issues among Japanese scholar
- Need to deliberate on "open access policy" at university-level.

15:30-15:40 BREAK

## 15:40-17:10 Open access of research data

### ☆ *Research Data Sharing and Frameworks* (Yasuhiro Murayama)

- "Open research data" was ageed on at G8 (2013) (not "open government data").
- Open data, not only literature, is a crucial element of scientists' consensus about research results, which will be the shared information resource between of science community and general society.
- International frameworks (ICSU-WDS, RDA): Japan hosts the international programme office of ICSU-World Data System (at Natl. Inst. Info. Comm. Tech., Japan) .
- Situation in Japan (Cabinet Office; CA): Prof Harayama, a member of national Council of Sci. Tech. & Innovation (CSTI), received a message from G8 stating the promotion of RDA (alliance on open data).
- Under CA/CSTI, national open science policy is under discussion.
- National Diet Library is forming a new 5-year institutional plan trying to include open data and discussing data resource preservation.
- What to preserve: Data to keep reproducibility; Data to be reused folr new innovation, Data indispensable as record of history (temporary-increasing data of climate change, earthquake, living human bodies, societies,..).;
- ICSU (International Council for Science since 1931) started a new scientific data managemnt committee ICSU-WDS 2008, based on the two data bodies operating since 1957.
- Culture aspect of Open Research Data need long time, like intl. metric system and time zone with 100-year scales to change society (Mark Parsons, (2013).
- Data citation with DOI starting with commercial STM publishers. How to create a system better than DOI? Serial crisis on data?
- Evaluation of data to preserve is important; review process (like peer review of journal publication) may work?

### ☆ *Situation of DBCLS* (Hidemasa Bono)

- The integrated database in life science (togoDB) using RDF through biohackathon
- FirstAuthors' review activity in CC-BY, TogoTV (tutorial movies), tools to read/write papers
- Please see the handout more.
- http://figshare.com/articles/Towards_healthy_circulation_of_OA_data_in_life_science/1297182

### ☆ Situation of arts and humanities

AsanobuKitamoto

- Digital Silk Road project (databases for digital humanities http://dsr.nii.ac.jp)
- Toyo Bunko (Library): digitization of 203 books, 59358 pages. Captions are manually annotated.
- Geometric correction of maps, photos, and gazettes…
- Data integration through language translation, word definition, ..
- Platform to show evidences of integration accuracy is important. Non-textual data IDs with annotation.
- Interpretation of data is necessary. Such resolution can also be non-textual.

Makoto Goto

- nihuINT is an integrated retrieval system for ancient Japanese Humanities over 150 databases.
- The databases are not open. Reuse is impossible. Many access problems still exist.
- Archival information, museum information are very well protected.

Takanori Kawashima

- NDL is National Library of Japan, Deposit Library of Japan. NDL's first mission is to contribute diet through research,
- but also offer services to libraries and public.
- Many digitized old books and journals are available through "National Diet Library Digital Collection"
- For bibliographic data, NDL search offer APIs.
- More contribution to linked open data is anticipated.
- NDL Lab: http://lab.kn.ndl.go.jp/ is something like British Library Lab.
- It has experimental systems like crowd-sourcing platform(crowd transcription project) and digital reading support system
- NDL expects to establish a knowledge-circulating platform.

### 17:10 Closing

Citizen science in France is just emerging (like in Japan).

## Press release from the French embassy[22]

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# Compte-rendu : Mission d'experts français sur l'Open Access

Une mission d'experts français portant sur l'« Open Access » a été organisée du 27 au 30 Janvier 2015 à Tokyo, par le service pour la Science et la Technologie de l'ambassade de France au Japon.

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[22]http://www.ambafrance-jp.org/Compte-rendu-Mission-d-experts

**Participants au premier workshop (28 Janvier 2015)**

Crédit photo : Ambassade de France au Japon

Une délégation réunissant des experts français dans le domaine de l'Open Access, sujet clé à l'échelle mondiale pour le monde de la recherche, a été invitée par le Service pour la Science et la Technologie à venir au Japon du 27 au 30 Janvier 2015. Cette mission visait à rencontrer l'ensemble des parties prenantes pour faire un point complet sur la situation au Japon en matière d'Open Access et d'envisager de possibles collaborations.

## L'Open Access – un nouveau modèle pour la recherche scientifique mondiale

L'Open Access ou « Libre Accès » consiste en la mise à disposition immédiate, gratuite et permanente sur Internet des publications scientifiques issues de la recherche et de l'enseignement. Ce mouvement, initié dans les années 90, a pris de l'ampleur ces dernières années face au pouvoir de pression grandissant des éditeurs de revues scientifiques et leur mainmise sur les données, soulevant des questions sur la souveraineté numérique des pays.

## Renforcer la coopération franco-japonaise

La délégation française, coordonnée par l'Inria (Institut national dans le domaine des sciences du numérique, a pu à cette occasion rencontrer les responsables de différentes institutions japonaises impliquées sur le sujet de l'Open Access : le MEXT (Ministry of Education, Culture, Sports, Science and Technology), la JSPS (Japan Society for the Promotion of Science), la JST (Japan Science and Technologyagency),

le NII (National Institute of Informatics), et également le Dr Yuko Harayama, membre exécutif du CSTI (Council for Science, Technology and Innovation). Deux ateliers de travail, l'un réunissant des représentants de bibliothèques universitaires, le second les scientifiques japonais impliqués sur ce sujet, sont venus compléter ces entretiens. Les discussions ont notamment porté sur :

- Les plans existants de souscription aux revues scientifiques et de licenses nationales (coûts, services associés comme l'archivage et l'exploration de données, ou « data mining »).
- La politique existante et la position japonaise sur la question des modèles « Gold Open Access » où les auteurs paient pour la publication de leur article, « Green Open Access » où les auteurs déposent une copie de leurs articles sur une page personnelle ou une archive ouverte, ou encore les modèles hybrides.
- Plus particulièrement sur le modèle « Green Open Access », l'état actuel de déploiement d'archives ouvertes (et la politique menée pour encourager les chercheurs à y déposer leurs publication) et de plateformes d'évaluation et à contenu éditorial (épi-journaux, « overlay journals »..)
- La politique en matière d'accès libre aux données de la recherche : infrastructures et recommandations au niveau national pour la mise à disposition libre des données de recherche.

De nouvelles possibilités de collaboration, pour la synchronisation d'archives et de plateformes, le développement des services associés, mais également pour l'échange de bonnes pratiques en vue de sensibiliser les chercheurs, ont été mises en valeur. A l'issue de cette mission, un rapport fournira un état des lieux sur le statut actuel de l'Open Access au Japon et ces perspectives de collaboration.

**Contact** : Mme Evelyne ETCHEBÉHÈRE, attachée pour les Sciences et Technologies de l'Information et de la Communication à l'Ambassade de France.