

# Japanese journal digitization and portal service GeNii

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## 1. Introduction

This is to introduce our experience on digitization of Japanese journals in NII. Japan has relatively long history of digitization. And the field of digitization is rather broad. In this paper, NACSIS-ELS journal digitization program and its new user interface GeNii are introduced, with a little bit of observation about Japanese digitization experience.

## 2. NII

National Institute of Informatics or NII is relatively new organization. Therefore, some introduction will be needed. NII is one of the inter university research institutes in Japan. As well as some 90 national universities, they are subsidized by the government. Many of them provide research facilities to university community.

NII was established in year 2000. Before that it was **NACSIS** or National Center for Science Information Systems which operates information services to university community.

Now, NII has two faces. One is research on informatics, or any discipline relating to information. It covers computer science, information science and other natural or social science fields.

The other is information service. NII operates research network SINET for universities, shared cataloging and interlibrary loan system NACSIS-CAT/ILL and portal service to scholarly information called GeNii for researchers.

## 3. Some observations on Japanese digitization

Before I go into our experience, I would like to summarize Japanese situation on digital library world.

Japan has relatively long history of digitization. Experimental service can go back to mid 1980s [1]. NACSIS-ELS started its service in 1995 [2].

But, maybe because of long Japanese recession, commercial publishers or vendors didn't go into digitization business. Except for a few limited services including MANGA publishing, there is no substantial commercial service especially in research information field.

As a result, major digital library services are mostly by university libraries or institutes,

except for grass root voluntary based sites.

One of the consequences of early development, Japanese digital libraries, in my regret, did not introduce open metadata concept. It is still difficult to find relevant resources; even they are digitized by some library.

#### **4. Brief history**

NACSIS-ELS or Electronic Library System started with very small scale in 1995, and in full service from 1997.

In year 1996, NAIST or Nara Institute of Science and Technology Library started its digital library service. NAIST is a national university newly established in 1991. Their new library digitized about two hundred titles of journals with copyright permission for in-house users only. But, right after their digital library launched, commercial online journals came into the market. Introduction of online journals offers wider choice of titles with lower cost. NAIST digital library had to withdraw from original plan.

While NACSIS-ELS service became full scale in 1997, Kyoto University Library started their digital library service in 1998. It offers access to the library's rare book collection. Though it still has a certain number of users steadily, it can not acquire wider potential users, in my opinion, because of lack of meta-data cooperation.

In later 1990s and in early 200s, many other projects of digital libraries started. But, they are more or less similar to Kyoto University Digital Library.

#### **5. NACSIS-ELS**

NACSIS-ELS is something like Japanese JSTOR. NII digitizes Japanese academic journals with licenses from academic societies. Metadata are added in NII.

Another source of digitization in NACSIS-ELS is university bulletins. Japanese universities publish bulletins, which is, often, valuable resource, especially in humanities and social science fields. PDF form of these titles are deposited and accessed through NACSIS-ELS. In this case metadata are produced in universities (usually by their libraries).

By April 2005, about 700 titles of 260 societies and 3700 titles of 660 universities are available in NACSIS-ELS.

Though number of participating societies is not so many, major part of active societies has already joined. For example, in humanities field, The Society for Japanese Linguistics and the Historical Society of Japan, and in science and technology field, the Physical Society of Japan and the Institute of Electronics, Information and Communication Engineers.

The most difficult part of NACSIS-ELS service was not in technology part, but in social or business model part. Academic societies were reluctant to digitize their journals, fearing it might cause decrease of their subscribers. Many societies weren't persuaded by the argument that the journals would acquire broader readers by free access to digitized journals.

To encourage societies to join NACSIS-ELS project, NACSIS provided copyright fee system. Societies set up prices for their journal page access. Of course, the price could be zero. But, still, users have to have individual account, and pay for non-free pages. NII collects the fee from users and pay to societies.

## 6. GeNii

After several years of operation, NACSIS-ELS became old fashioned. There are some factors.

First, PDF format became de-facto standard for document exchange. Second, commercial online journals came into world and spread out rapidly. Third, users tend to avoid individual user account registration, and site license, usually via IP address became common.

After the turn from NACSIS to NII, a new service was conceived. Integrating database services provided by NACSIS and NACSIS-ELS, new service was named GeNii, we pronounce it Jee-Nee. GeNii is the portal service to all databases NII offers. It is composed of four components. Component is a set of data contents and user interface. Among them, CiNii is the main portal for digital journals.

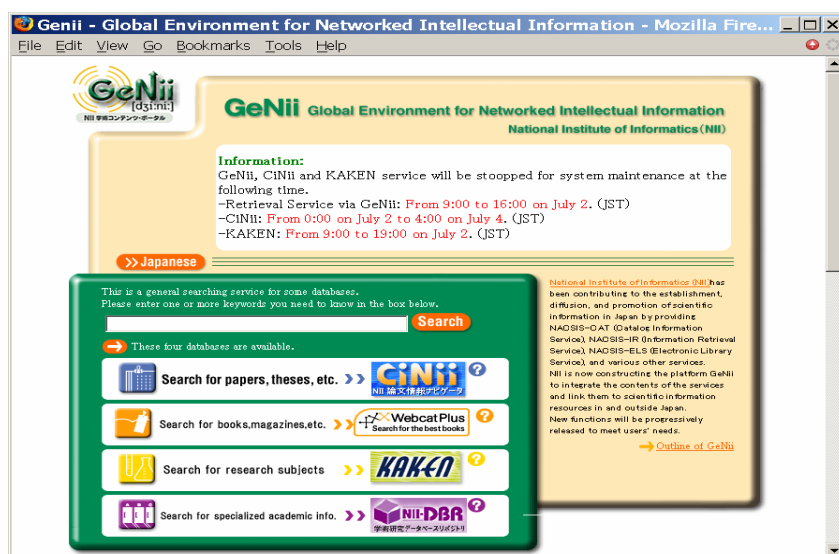


Figure 1. GeNii top screen

The top screen shows the four components, but you don't need to know what the components are. Just enter keywords in the box, and a click will lead you to an appropriate component. [3]

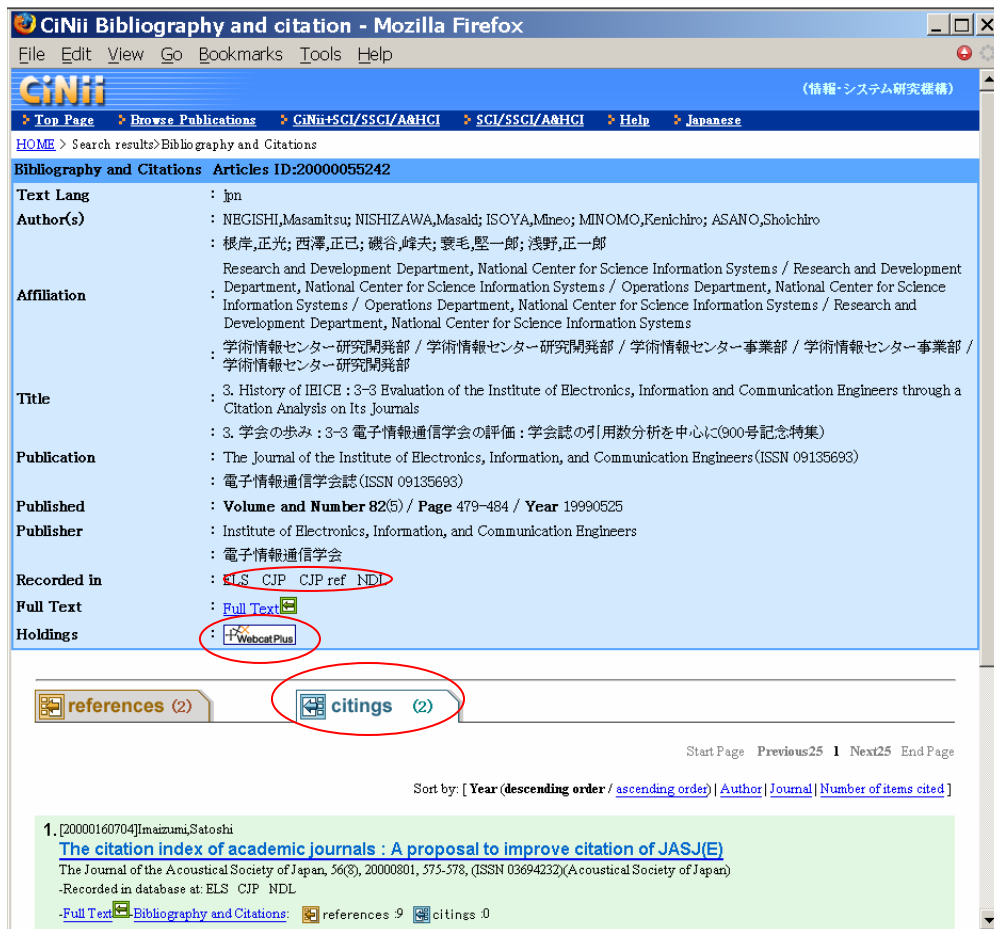


Figure 2. CiNii sample screen

Figure 2 is a screen from CiNii. It shows a metadata of a journal article. There is a link to the full text image, a link to the library holdings information of the journal, links to the citations and links to the citing (if any).

There are various sources of metadata and digitized resources for CiNii. But the coverage is not comprehensive. You may not be able to reach full text from all of the search result. In fact, major part of the entries has no full text link, yet. But, this ratio will grow up in near future.

Other components of GeNii may not be strongly related to digitization. But, I will explain them very briefly:

Webcat-Plus is a portal to monograph books and journal titles. You can search nearly all the book titles published in Japan, and book titles held in Japanese university

libraries. Search interface of this component offers very attractive associative search. Kaken is to search research projects. Current database contains all the projects supported by Grant-in-Aid program from Ministry of Education. Another component is NII-DBR, which is a database repository. Databases produced by societies or other institutions are hosted from GeNii service.

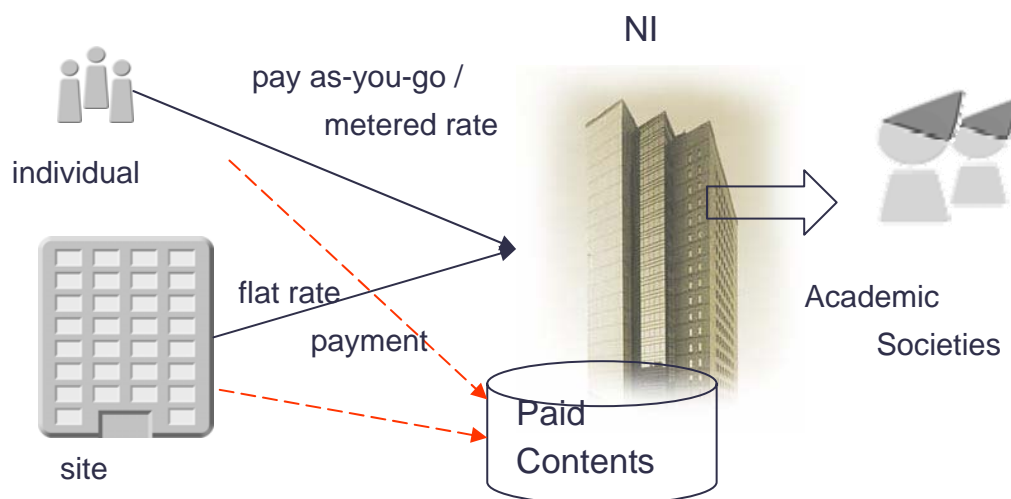


Figure 3. Copyright fee management of GeNii/CiNii

GeNii has copyright fee system, improved from the experience of NACSIS-ELS. But, basic schema is same. NII collects fee from users and pay for copyright holders.

From the user side, various options is now available. There is site license scheme and individual account. General users need no special authentication, and can use \*pay-per-view\* with credit card.

But, this makes contracts with copyright holders more complicated. Some societies declare "open access policy". Some agrees with flat fee, but others do not. Currently, some of contents can be reached only through individual user registration and not through site license. This kind of problems should be solved in future.

I suppose, technology aspect of digitization is near stable now. The biggest issue lies in the field of right management and access management.

## References

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[3] NII, “Genii - Global Environment for Networked Intellectual Information”,  
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