

National Diet Library Newsletter

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Welcome to the Laboratory: the birth, present, and future of the NDL Lab

Research and Development for Next-Generation Systems Office
Digital Information Services Division
Digital Information Department

*This is an abridged translation of the article in Japanese of the same title
in NDL Monthly Bulletin No. 640/641 (July/August 2014).*

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NDLラボへようこそ。ここは、国立国会図書館の実験的なサービスを提供するサイトです。

国立国会図書館月報記事掲載

2014/07/22

[国立国会図書館月報640/641号\(2014年7/8月\)p4-11](#)に、NDLラボ紹介記事が掲載されました。

翻デジを公開しました

2014/03/26

近代デジタルライブラリの資料を共同でテキスト化する仕組み[翻デジ](#)を公開しました。

NDLラボサーチの新バージョン公開

2014/03/19

NDLラボサーチの新バージョンを公開しました。JavaScriptを活用した新しいシステム構成で、軽快な動作を実現しています。

<<Top page of the NDL Lab>>

1. Birth: What is the NDL Lab?

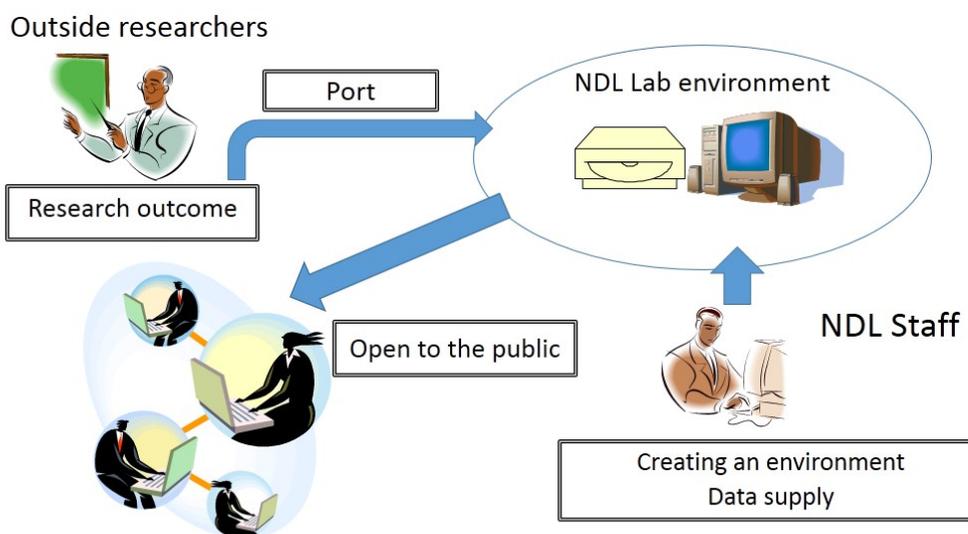
"NDL Lab" is a website which has been offering an experimental environment for new library services since May 7, 2013.

Ongoing development of information technology requires us to research in order to realize inventive and leading-edge services. In October 2011, the National Diet Library (NDL) set up for this purpose a new division named Research and Development for Next-Generation Systems Office (R&D office) under the Digital Information Services Division of

the Digital Information Department. The R&D office launched "NDL Lab," a virtual place for cooperation with researchers from universities and institutes to make use of their cutting edge knowledge.

NDL offers its resources such as the server environment of the NDL Lab, digitized materials' data and bibliographic data to the researchers. They experiment with software using these resources. The developed software will be ported to the NDL Lab's server environment and tried by many people through the Internet. The experiment's fruits will contribute to the enhancement of future library services of the NDL and in Japan.

Image of the NDL Lab environment



<<Image of the NDL Lab environment>>

NDL has been calling upon outside researchers for collaboration on various themes. Now the NDL will widely invite suggestions regarding future library service with novel technology.

2. Present: Three systems

Three systems are opened in the NDL Lab now: Digital reading support system, Hondigi 2014 and NDL Lab Search.

2.1 Digital reading support system

Digital reading support system is a convenient digital-book-reading-system through the computer screen. It has been mainly developed by Dr. Takeshi ABEKAWA of the National Institute of Informatics. It was unveiled in May 2013 on the NDL Lab. Some materials of the "[Digital Library from the Meiji Era](#)" are available through this reading system. The following functions are provided by making use of text data which the technology of OCR, optical character recognition, extracts from the images in the materials.

- Reading support function: It offers assorted information obtained from character strings of the material on the right-and-left of the screen showing the material's image in the center. For instance, information from the Wikipedia Japanese version is displayed corresponding to the keyword in the text.
- Automated indexing function: Generating index automatically by picking up keywords

from the whole texts of the material. You can see the materials' main topics from frequency of keywords in the texts.



<<Reading support function>>

2.2 Hondigi 2014

Hondigi 2014 is a crowdsourcing platform for digital transcription of the [Digital Library from the Meiji Era](#). It is provided by "Transcribe JP," a project of the Japanese Association for Digital Humanities led by Kiyonori NAGASAKI, senior fellow of the International Institute for Digital Humanities and project associate professor of the University of Tokyo Interfaculty Initiative in Information Studies. It was unveiled in March 2014.

The aim of this project is to make images of Japanese materials searchable through full-text search engines such as Google by inputting text manually. Anyone who registers can come on board with this project. Even part of the transcription makes the corresponding part of the material searchable through search engines. Introducing OCR and emending texts makes it easier in the future, although at this point you need to input whole texts manually.

2.3 NDL Lab Search

NDL Lab Search is an experimental retrieval system based on the NDL search, the NDL's search system, factoring out some functions such as the outside database cross- and integrated-search and adding new functions for verification. The NDL's holdings including books, magazines, newspapers, etc. and the Japanese periodicals index, are targeted information. It was unveiled in September 2013 and updated to the current version in March 2014. Main functions are as follows:

- Speeding up to show search results: Using JavaScript in the web browser, it actualizes swift operation at browser-side by handling data other than data search.
- Bookmark function: You can accumulate checked bibliographic data from search results as a "bookmark" and output them as a list. Some bibliographic data related to the bookmarked results are shown as "recommendation" materials and you can add them to your bookmark.
- Integrating search results and bibliographic details displayed on the same screen: You can see bibliographic details on the search result without screen transition.

NDL intends to introduce these pilot functions into the NDL Search and a prospective retrieval system in the future.

3. Future: NDL Lab in the future

In January 2014, the R&D office held an expert council on the NDL Lab projects. The target of the council was to report our efforts to outside experts and obtain the future prospective of the project based on their feedbacks.

Some feedback comments from the council are as follows:

- It will be easier to get suggestions for solution from outside experts if the NDL shows detailed agendas to the public.
- Introducing the NDL Lab project affirmatively and explaining its agendas and challenges at academic conferences, etc. make it easier for the NDL to recruit outside experts and find opportunities to present results.
- Improvements such as facilitating API usage and providing clear conditions of available data are indispensable for the research environment.

NDL will activate the NDL Lab project by cooperation with more and more experts based on these feedbacks.