

Digital Archives at the National Archives of Japan

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1. Digital archives of the National Archives of Japan

The National Archives of Japan (NAJ) has two digital archives, one of which is the National Archives of Japan Digital Archive, which started operation in 2005, as an information provision service, enabling searches of catalogue information for official documents classed as important historical materials. The digitalized images of original records can be viewed online, and the system was renewed in 2010. The above materials are held by NAJ, following their transfer from the administrative organs of the state. Presently, the NAJ Digital Archive is working to enhance the information provision service to citizens by pushing forward digitalization of the archives, and promotion of their use, backed by A New Strategy in Information and Communications Technology, namely the national IT policy and the Public Records and Archives Management Act.

The other is the materials information system of the Japan Center for Asian Historical Records. This is a digital archive used to provide Asian historical records online, which started operation in 2001 and shifted to a new system in 2011. “The Asian historical records” are official documents and other records of Japan which constitute important Japanese historical materials concerning its relationship with Asian neighbors in modern and contemporary history.

The Japan Center for Asian Historical Records receives digitalized images of Asian historical records held by NAJ, the Diplomatic Archives of the Ministry of Foreign Affairs and the National Institute for Defense Studies of the Ministry of Defense, and subsequently provides them online.

2. Outline and background

The NAJ Digital Archive is an information provision service allowing online searching of information on the specified historical public records and archives held by NAJ, and use of its digitalized materials. Through this archive, we can access historical official documents held by the National Archives of Japan.

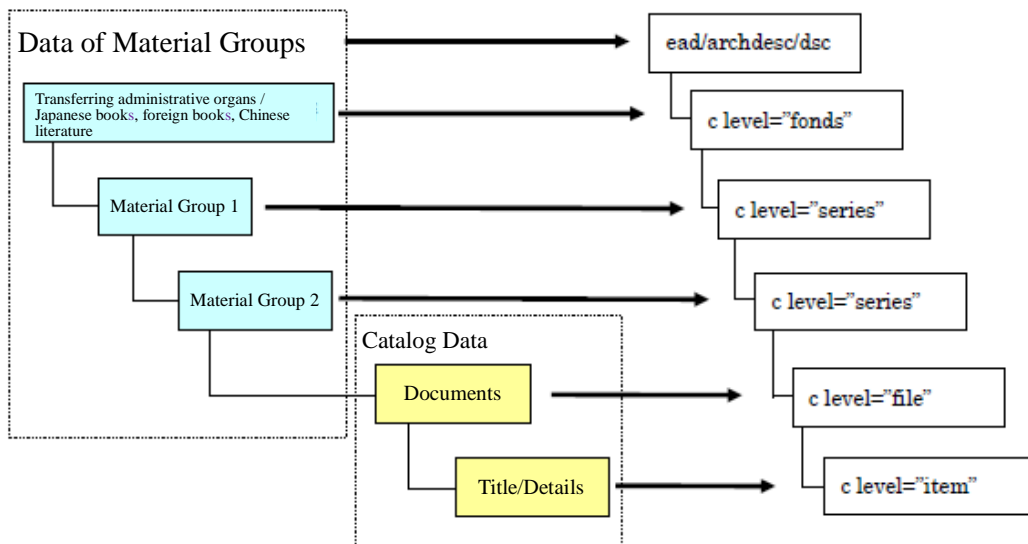
In the background where the NAJ Digital Archive was arranged, relevant circumstances include moves to push forward the utilization of information and communication technology along with the e-Japan Strategy, which started in 2000, proposals by the expert committee on

records management etc. from 2003, and the promulgation of the Public Records and Archives Management Act (PRAMA) in 2009. In line with the proposals by the abovementioned national strategy and the expert committee, the NAJ Digital Archive started operation in 2005 to push forward the digitalization of archive materials held by NAJ. Subsequently, it renewed its system in 2010 to enrich the information provision service to citizens and to “promote the use” as set forth in PRAMA, and has continued its operation to date.

3. Characteristics of the Digital Archive

The NAJ Digital Archive is based on the following ideas: “free access by anybody from anywhere at anytime free of charge,” “promotion of use and preservation” and “for the ubiquitous society.” These ideas mean that one can enjoy high resolution digitalized images of our holdings with an Internet-ready computer, regardless of place or time. Moreover, this means that the digital images of materials are retained in forms necessary for this purpose.

To realize the abovementioned ideas, the NAJ Digital Archive implemented the following generic technologies to constitute the system: the catalogue information database in the form of an XML database based on the NAJ EAD definition (figure 1) prepared according to EAD2002; character codes for character information throughout the system in Unicode format; digitalized images of materials in JPEG 2000 (ISO 15444); and the Dublin Core metadata element set (ISO 15836) to link with databases of other organs and ANSI Z39.50.

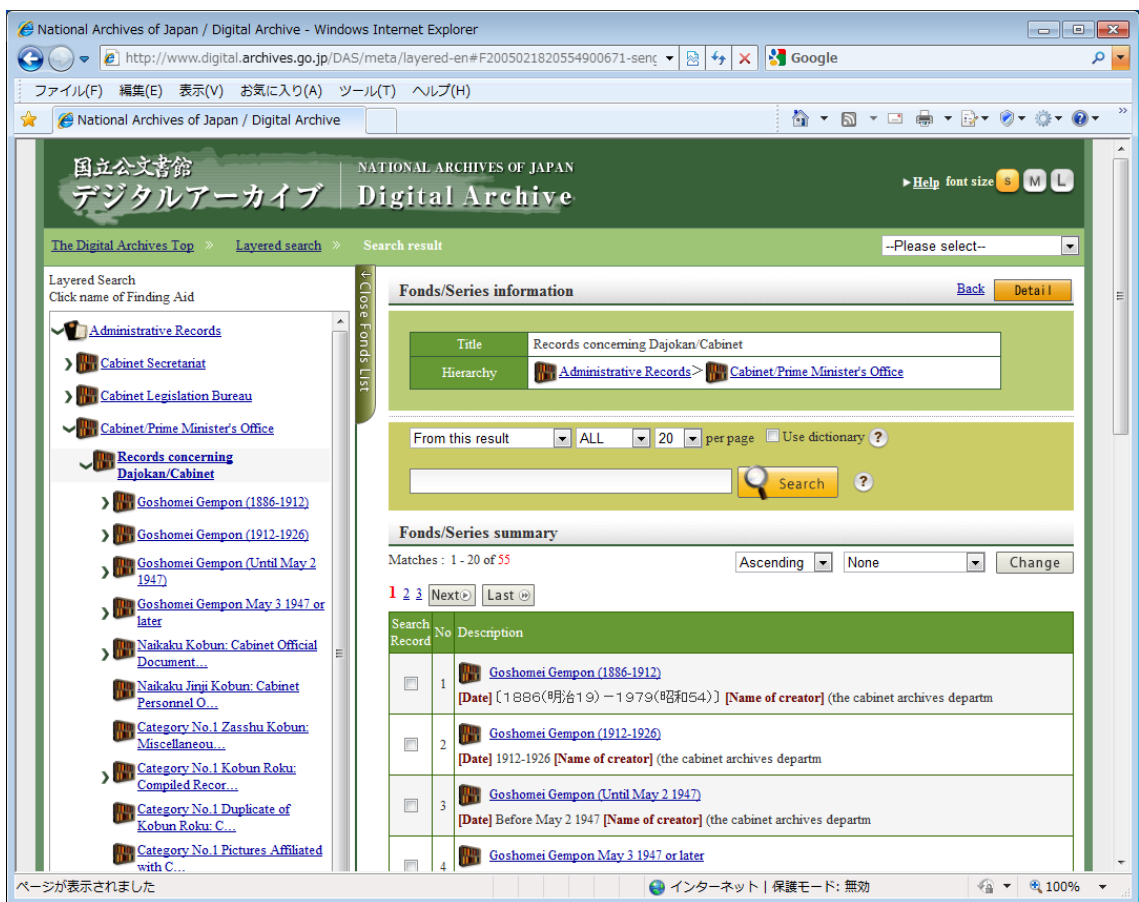


(Figure 1) Structure of the catalogue information in the NAJ EAD definition

Moreover, in order to provide better opportunities to use our holdings, catalogue information has been prepared to cover more than 99% of its holdings and is open to the public. The preparation and publication of the catalogue information are set forth in PRAMA. NAJ, however, makes it an in-house rule to open the catalogue information of historical public records and archives to the public within a year from the time of their transfer. The NAJ Digital Archive, by utilizing these generic technologies and cataloguing, provides not only catalogue information but also wide-ranging search methods and multiple file formats when they are downloaded.

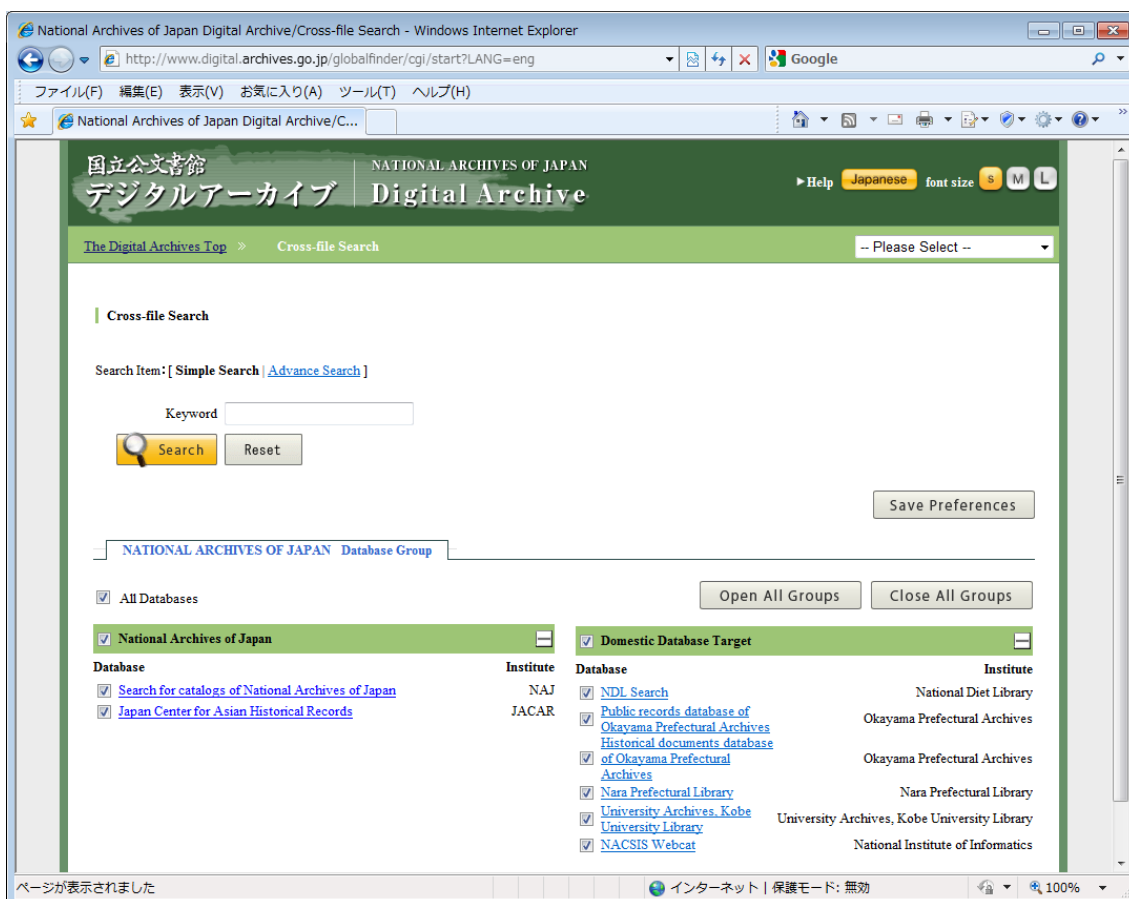
Materials can be searched for via keyword search, layered search and cross search.

The layered search is a function which allows materials to be searched while following information of the layered fonds. This function makes it possible to seek materials while tracing the hierarchy of the materials groups, by describing the information of our holdings in a unit of groups (collections) of materials (Figure 2).



(Figure 2) Example of the layered search screen

The cross search is a function which allows searches not only the database of NAJ Digital Archive, but also that of other organs simultaneously. The abovementioned international standards make it technically easier to establish this information link. Presently, archives of local governments, a university and the National Diet Library can be cross searched (Figure 3).



(Figure 3) Example of the cross search screen

Images are distributed not only in JPEG 2000 format, with which images of materials are digitalized, but also in JPEG and PDF formats. This means users can use images in a proper file format selected in accordance with their purposes and the transmission rate of the network line.

4. Various types of materials

NAJ holds a wide variety of materials different in forms and origins such as ancient books and documents, and donated materials, as well as official documents composed of administrative and judicial documents. Our holdings include, for example, official documents relating to the promulgation of the constitutions of Japan, history books from the Middle Ages,

picture scrolls of drawings showing the Imperial standard drawn more than a century ago, and ancient maps designated as important cultural property. Although these materials vary in nature considerably, their catalogue information is described based on the abovementioned NAJ EAD definition. Accordingly, they are managed in a single database system in the NAJ Digital Archive, and provided to the users.

Moreover, NAJ has been trying to selectively make copies of materials considered to be positively provided to the public among documents which record details of the modernization of Japan, important policy and decision-making processes, and post-war social development, by systematically digitizing such materials.

To digitize these materials, the abovementioned file format JPEG 2000 is adopted since it is an international standard with a low degree of dependence on any specific company. Once prepared, the digitalized images are entered into the NAJ Digital Archive and can be viewed online through the Internet by anyone, from anywhere, at any time, free of charge.

5. Promoting digitalization of archives

The basic ideas and framework relating to promotion of the digitalization of archives in NAJ are summarized in the Outline of Promotion of Digital Archive in NAJ. In the Outline, the following basic ideas are articulated:

(1) Response to national policy and various proposals

IT policy of Japan requires the circulation and transmission of high quality contents. With this in mind, there is a pressing need to improve the digital environment to access to our holdings, whether at home or abroad. In addition, NAJ is requested to build close cooperation with local archives and support their digitalization projects as highlighted in the Outline.

(2) Preservation and use of official electronic documents

We are now taking prompt actions to ensure preservation and use of electronic historical public records and archives as newly requested, and trying to introduce them while proceeding with study concerning desirable mechanism from a long-term perspective, in keeping with domestic investigations and study, and experience of archives in various advanced countries.

(3) Future vision of digital archives

Currently, the term digital archive means the digitization of materials and their provision. In future, however, it is supposed to change into something to take the lead in the “collective wisdom” of Japan, together with other digital archives, which will function as “a field” to

accumulate and provide information and knowledge itself, or to function as archives for the exchange of information in digital form. In the digitalization of archives, in which NAJ is engaged, we accumulate and provide memories of peoples, organizations and the society, as well as information and knowledge, relating to Japan and are striving to pursue a public “field” in which people can exchange their experiences.

In addition, actions based on the following policies will be implemented as well:

- Digital archive to promote the use of NAJ holdings for the purpose of convenience
- Enrichment of catalogue information and finding aids
- Digitization of paper materials
- Wide dissemination of information and close cooperation with related institutions
- Preservation and use of official electronic documents
- Offering technological assistance relating to the digitalization of archives

As above, NAJ are determined to positively support the digitalization of local archives and the organs concerned as a core organ in charge of preservation and better use of archival materials. We are also trying to help strengthen information distribution and dispatch on a national scale, by engaging in the improvement of digital environment so that anyone can access the materials held by those organs from anywhere, at any time.

6. Actions toward official electronic documents

So far, I have introduced the NAJ Digital Archive as a service to provide catalogue information and digitized images of its materials, all which are recorded in paper. However, as born-digital official documents have been transferred to NAJ since 2011, it is now possible to use them from the NAJ Digital Archive.

As for the official electronic documents, the expert committee on records management established in 2003 pointed out the need to tackle with this issue and a specific policy relating to methods of their transfer, preservation, and use was presented in 2010. Here, it was decided that from 2011 NAJ would start receiving official electronic documents prepared and acquired by state organs.

Therefore, in 2010 NAJ established the Electronic Records Archives of Japan (ERAJ), a distinctive system for the official electronic documents, and started its operation in 2011, whereupon the transfer of official electronic documents commenced.

Additionally, from this year, we also started providing official electronic documents to public users through the NAJ Digital Archive.

Virus checks are implemented for official electronic documents following their transfer from state organs. We conduct multiple inspections using two different kinds of anti-virus software. Having confirmed that the materials are not virus-infected, document files are converted into PDF/A, a file format for long-term preservation, while image files are converted into JPEG 2000. Furthermore, after adding metadata properties and confirming the content in terms of public access, these data are preserved together with official electronic documents for an extended period. Official electronic documents thus transferred will be provided for public users, after masking processing, through the NAJ Digital Archive in tandem with ERAJ.

Accordingly, the public users can view official electronic documents from the NAJ Digital Archive, search catalogue information of our holdings and browse official electronic documents via a single window of the NAJ Digital Archive, regardless of the various types of media involved. For official electronic documents which are subsequently received, we proceed with similar measures.

As the target for official electronic documents, in addition to documents and presentation materials, the scope of our business is likely to extend to animated and audio files, E-mail and records by communication tools such as SNS, as typified by Twitter and Facebook. Moreover, it is easy to envisage new forms of electronic records appearing in future. This indicates that a new technical problem may occur at any time. Flexibility is necessary to handle technical problems concerning preservation and use of official electronic documents, depending on the occasional situation.

Conclusion

In this presentation, the background and functions of the NAJ Digital Archive and the information it provides were explained. These functions, catalogue information relating to historical public records and archives, digitalized images of materials, and official electronic documents, all of these are information that we should keep providing continuously for the future. The NAJ Digital Archive is shifting to a new system with a view to provide these data in the near future.