§1. A Trial to Establish an Archival Finding Aid Utilizing the Encoded Archival Description - 1 -

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Since Fusion Science Archives (FSA) was established at NIFS in 2005, we steadily continued the effort to collect and preserve historical materials concerning nuclear fusion research at universities in Japan. As a result, over 19,000 historical materials were stored and registered in our working database (NIFS-FSAD) by the end of FY2008.

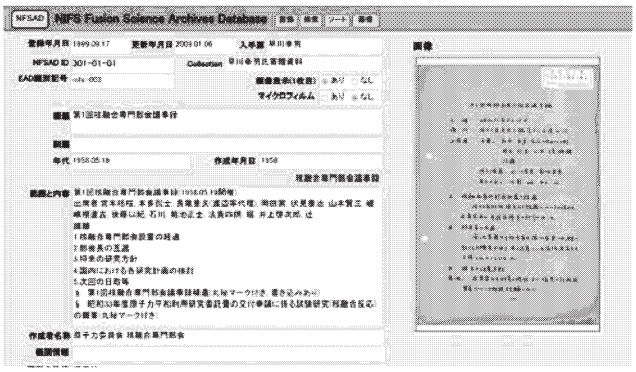

Fig. 1 An example of a record in NIFS-FSAD. In the latest version of NIFS-FSAD we introduce a new field, namely the scanned image of the first page of the document to give a visual image on document.

For easy access to these historical materials, an appropriate catalogue of registered materials and a convenient electronic finding aid available through Internet are required.

Application of EAD (*Encoded Archival Description*) was proposed; EAD is a de-facto standard for data of archival finding aid and is accepted as an international standard. For this purpose, intensive collaboration with Sokendai, National Institute of Japanese Literature (NIJL), High Energy Accelerator Research Organization (KEK) and Institute for Molecular Science (IMS) has been performed.

One of the specific features of EAD is its hierarchy structure. For conversion of NIFS-FSAD into EAD-based database, we introduce following hierarchy structure in our database.

Repository level : Fusion Science Archives
Collection level : a set of materials given by a certain individual or organization.
Series level : a set of materials in one box (ID = B301a, for example)
File level : a set of materials in one file (ID = B301-01, for example)
Item level : each individual material (ID = B301-01-01, for example)

Note that, in some cases we have no file level description.

NIJL has already owned a server accessible on the Internet that treats information of archival materials related to the history of Japan, and is advancing EAD-based archiving. Utilizing the tool developed at NIJL, so called "Archival materials information sharing Database (AMISDB)", we aim to establish a common database for materials information as a prototype. This will be a part of the archival union catalogue in Japan. This means that materials information on the history of Japan and on archives of Inter-University Research Institutes can be retrieved at the same time.

In 2008 another new project organized by one of the authors (TY) was started. This new project aims to establish an EAD-based archival database for the materials, given by the late professors in the field of physics; they are Yukawa, H., Tomonaga, S. and Sakata, S., who worked also in the nuclear fusion research field. When these databases will be constructed and be in operation, cross retrieval through these databases including our NIFS-FSAD, will be available.

By the end of FY 2007 we successfully performed trials of conversion for some records into EAD/XML-based information retrieval system. Here we used a crosswalk (correspondence table) between NIFS-FSAD and EAD.

Based on the experiences in the past years, in this year we entered into the full-scale conversion from NIFS-FSAD into EAD/XML-based one, utilizing the tool, technical description of which is given in a separate report in this issue of Annual Report. By the end of FY2008, we confirmed the validity of the developed tool, and successful conversion. Two web pages for data retrieval were prepared, i.e. for "standard search" and "advanced search". On the later part, search by key words for individual fields is available.

Fig. 2 A screen view of EAD/XML-based information retrieval system. On this page one may see also the hierarchy structure in "Hayakawa's Collection".

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