§1. A Trial to Establish Database by the Use of EAD

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The total number of materials of NIFS Fusion Science Archives amounted to more than 17,000 by the end of FY 2006. Much effort was made on registering the stored materials into Database. Catalogue of registered documents is required to be available through Internet in order to open the documents to public.

In order to provide us with more convenient electronic finding aid, *Encoded Archives Description* (EAD) that is accepted as an international standard was adopted. For this purpose, intensive collaboration with Sokendai, National Institute of Japanese Literature (NIJL) and High Energy Accelerator Research Organization (KEK) has been carried out.

Department of Archival Studies of NIJL has already owned a server accessible on the Internet that treats information of all historical materials related to the history of Japan, and is advancing EAD-based archiving. Following NIJL's methodology ("Historical materials information sharing Database"), we aim to establish a common database for materials information as a prototype as well as at KEK and Institute for Molecular Science (IMS). In a word, we try to establish a systematic method of converting the catalogue accumulated with popular data base software (Filemaker Pro etc.) into the description of EAD (It is defined by SGML and it is achieved with XML).

We target research activities of laboratories related to fusion including those in the period of their preestablishment and the record of the operational management. We put this catalogue rewritten in EAD on an appropriate server and are constructing an accessible information retrieval system with the Internet. When this is achieved, it will be able to retrieve various materials information on the platform common to Sokendai, NIJL, KEK and IMS. So, materials information on the history of Japan and on archives of Inter-University Research Institutes can be retrieved at the same time for instance.

In this fiscal year we tried to describe database with EAD for two examples, that is, the finding aid for materials from Prof. Yoshihiko Ichikawa and those from late Prof. Satio Hayakawa. It was required to describe the collection (fonds/record group) level to express a certain material with EAD. In addition, it was necessary to describe the collection to fix the origin, i.e. the donator and the source, and to understand as a material group.

The editing function used for "Historical materials informational common data base" at NIJL is effective for making the guide description as we previously described. It is found that the database constructed on the basis of FileMaker Pro is easy to convert to EAD and is available online in XML data format. For this purpose a database tool was developed through our collaboration, which is effective for retrospective conversion from the data base at the item level of existing FileMaker Database. The correspondence table is as follows.

Table 1. Correspondence of the fields in NIFS-FSAD and EAD

	NIFS-FSAD	EAD	
No.	Field	elements and levels	status
1	Date registered	note/p/date[@type="registered"]	P
2	Date checked	note/p/date[@type="checked"]	P
3	ID number	did/unitid	R
4	Date arranged	arrangement/p/date[@type="arrangement"]	P
5	Document source	acqinfo/p	P
6	Title of the document	did/unittitle(/title)	R
7	Subtitle	did/unittitle(/title)	M
8	Year	did/unittitle/unitdate	R
9	Brief description of the contents	scopecontent	M
10	Author or organization	origination(/*name)	M
11	Date of issue	did/unittitle/unitdate	M
12	Appearance or form	did/physdesc(/extent|dimensions... etc.)	R
13	Box number	container[@type="box"]	M
14	Reference ID No.		
15	Keyword 1: Organization	controlaccess/*name	R
16	Keyword 2: Classification	controlaccess/{genreform|subject}	M
17	Keyword 3: Committee	controlaccess/corpname	M
18	Keyword 4: Field or purpose	controlaccess/{genreform|subject}	P
19	Keyword 5: Research field	controlaccess/subject	P
20	Keyword 6: Other information	controlaccess/subject	P
21	Remarks	note/p(|blockquote|table|list...etc.)	P

NOTE:

The NIFS-FSAD field corresponds to the EAD element at the item level.

Therefore, the hierarchy of the EAD element of the above table is limited to ead/archdesc/dsc/c0x or lower level.

If the column of the EAD element is a blank, it shows that there is no EAD element corresponding to the item of NIFS-FSAD.

The under line part in the EAD element column corresponds to the item of NIFS-FSAD.

The sign "|" shows that we can arrange the element or the item etc. in parallel on the same level.

The description in "[ ]" specifies the attribute in the element.

The description in "{ }" shows whether each element or each item delimited by "|" can be selected.

The description in "( )" is displayed for reference.

＊Name is either of name of "Persname" or "Famname" or "Corpname" or "Name".

The label attribute value and the head element that showed the element and the item name were omitted from the table.

The status column shows whether it is indispensable as an element of EAD or not.

R, M and P refer to Required, Mandatory and Preferred, respectively.