

§1. Collection of Documents About Fusion Research in Japan and their Historical Analysis

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i) Goals

Scientific research activities are not performed by single or solitary agents or persons, and the archiving facilities for them are frequently established individually and separately. However, in practical studies of science history, the archived documents in such archives or libraries, which may be located at distant places, are usually looked for and referenced together, and identifying relevant documents from various archives may not be a simple job. A project performed as NIFS collaboration was started to study and prepare network servers of the archives databases and software systems which allow users of the archives to search for related documents in multiple archives from a single platform, which may be called as *Information Sharing System*, and a few such systems have been identified and adopted for this purpose by the collaborating members of the project¹⁾. Current project is the successor of the previous one, and its purpose is to identify and look for problems and possible solutions of them. The targets of systems to study are following two:

[A] *The SOKENDAI Archival Information Database*²⁾, the collaborative archival databases of Sokendai and its parent research institutes, among which the Fusion Science Archives (FSA) of NIFS is playing a central role.

[B] A database server for *finding aids* (catalogue data) of *Memorial Archival Libraries of H. Yukawa, S. Tomonaga, and S. Sakata*³⁾ placed at YITP, Kyoto University, which was set by a JSPS KAKENHI projects⁴⁾.

These two systems have been operated fairly well with predesigned functionalities for general purpose systems, however, they may have not been developed sufficiently for real usages requirements. It is necessary to identify and adjust some unfavorable features which users may encounter in practical situations. In the following sections some of the issues studied in this project are described.

ii) Publishing Finding Aids of the Archives with Information Sharing Systems

By the project [A] an Application Service Provider (ASP) of *Infocom* is adopted for NIFS FSA, KEK Archives Office, and Sokendai Archives to publish their finding aids of the archives. The number of accesses to

them increases and the requests of inspection and reference of the documents also copiously increases. However, it is desirable that more archival libraries of the Sokendai's *parent institutes* participate in the operation of the server to make the database more useful. The above core members of the project are now somehow defined as divisions within their institutes, but other institutes have established such archives offices, yet, and therefore even if the similar offices exist informally, like Office of Historical Documents Compilation of IMS, the future situation of them are not clear. Probably this is the reason why the number of participating institutions does not increase. The KAKENHI project [B] was terminated in March 2014, and the memorial archival libraries lack financial support for intensive maintenance work. The libraries will be maintained and never disappear; and the server system is still maintained by YITP without any major upgrades. For the server it adopted a software system called *Archon* which is a free open source software, but its development team announced that the system will not be developed further but that it will be replaced by another system *ArchivesSpace* which is again an open software. Now, whether the server at YITP can be upgraded to the new system is not clear due to lack of resources, mainly the persons to carry out this task. Considering this situation next step of the server maintenance and development should be re-examined.

iii) Issues on the Management of Scientific Archives with New Legal Condition in Japan

The Public Records and Archives Management Act has been effective since 2011, and documents and records of Inter-University Research Institute Corporations are now subjects of the law, which requires that the documents must be saved some official establishments for long term preservation or they must be destroyed. This may be a different issue from the database management but it causes severe problems on the fate of the archived documents of research activities. The databases may depend on the relation to those official establishments for permanent preservation and the policies of them.

1) C. Namba *et al.*, Annual Report of NIFS, 2012, p.462; Y. Takaiwa *et al.*, *ibid.*, p.463;

2) <http://www.i-repository.net/il/meta/pub/G0000093OUDAN>

3) <http://yhal.yukawa.kyoto-u.ac.jp/archon/>

4) Y. Takaiwa *et al.*, JPS Conf. Proc. 1, 019005 (2014)