

§8. Development of a Cooperative Internet Searching System of Multiple Scientific Archives

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Background Status of the Project.

The archival documents of NIFS-FSA are very much useful when studied together with other scientific archives. Keeping in mind this, the main goal of the project is set to establish a unified searching system for *Finding Aids* (documents catalog databases) of multiple archives of scientific organizations or individual scientists. Another project of NIFS cooperative studies is running in parallel and they set similar goals with different aspects and focuses on the problems due to different choices of system for the database servers; a commercially available general purpose system or a customizable open software system. Their activities in past have been reported in the NIFS Annual Reports of previous years, and the current report is the update for 2012 for the project with the latter choice¹⁾.

The projects uses databases of archives of KEK (High Energy Accelerator Research Organization) and IMS (Institute for Molecular Studies) as well as NIFS-FSA. For the current project other archives data which are available from yet another project of personal archival libraries described below are also used, which uses the same open software for the database server.

Conditions for Unified Database Servers.

It is important to remind following remarks for the unified database search system;

- (1) the structure of catalog data follows the broadly accepted archival description standard,
- (2) each contributing archival library easily provides such standard description data either by-hands or an automated system from its own database,
- (3) the user-interface of the system must be reasonably easy to use for archives administrators, editors, and public users who are not necessarily experts of information-science or database-technology.

For (1), an international standard EAD (Encoded Archival Description) has been adopted as a general guide line, however, the full specification of EAD is pretty comprehensive and it contains too much details

more than needed for usual usage. Therefore both of the candidate systems use the EAD specifications only partially, and thus procedures of (2), exporting existing finding aids into the target system, are not trivial even if they follow the EAD. The points of study are mainly on (2) and (3); how the data export procedures are designed for individual archives and whether it may be applied to other cases, and the system itself and the user interfaces for editors and users can be customized to acceptable level.

Once the software system was chosen, which usually have more capabilities than EAD requires, it is interesting to test whether those extra functionalities are useful. This is another points of studies in these projects, and an example will be described below.

Testing Open Software System Based Server.

The adopted software, *archon* is designed to run on Linux using Apache, MySQL, and PHP, which is recognized as a standard one by SAA (Society of American Archivists). The test of the system has been performed for three archives, Yukawa Memorial Hall Archival Library (YHAL), Tomonaga Memorial Room Archival Documents (TTMR), and Sakata Memorial Archival Library (SMAL) cooperating with the project of Grants-in-Aid for Scientific Research²⁾. The URL of the server is <http://yhal.yukawa.kyoto-u.ac.jp/archon/>.

When its operation started in 2011 only SMAL data were included, and in 2012 YHAL and TTMR data were added to demonstrate simultaneous search with all these archives. A screen of the archon site for the YHAL is shown as an example. After a little work, we immediately realized that more customization for Japanese language is required.



Also, a new item of study has been initiated; *i.e.*, adding context data or authority data of the archival records into the databases of the archon. This study needs more work to understand its usefulness to our purposes.

- 1) Y. Takaiwa *et al.*, *NIFS Annual Reports, April 2011—March 2012*, NIFS, (2012), pp.333; C. Namba *et al.*, *ibid.* pp.334;
- 2) Grants-in-Aid for Scientific Research, “*Study of Memorial Archives of Yukawa, Tomonaga, an Sakata and development of their archival description databases*”, granted for 2008-2010; “*Development of Particle Physics in Japan — studies through analyses of Memorial Archives of Yukawa, Tomonaga, an Sakata*”, granted for 2011-2013.

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