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**Retrospective Application of Online Catalog Author Authority  
Control: A Pilot Project**

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## **Retrospective Application of Online Catalog Author Authority Control: A Pilot Project**

by Therese A. Berkhout and Sara R. Tompson

(Berkhout was a Dominican University Graduate School of Library and Information Science Practicum student at the Fermilab Library, Spring 1999. Tompson is the Fermilab Library Administrator.)

### **I. Background**

The Fermi National Accelerator Laboratory (Fermilab) is operated by Universities Research Association, Inc., under contract with the U.S. Department of Energy. Fermilab is a basic research laboratory, utilizing the Tevatron particle accelerator to better understand subatomic particles as they exist now and as they existed near the birth of the universe. Fermilab is situated between Batavia and Warrenville, Illinois. Fermilab was commissioned by the Atomic Energy Commission and built during 1967-1973. Wilson Hall, named after the first Director of the Laboratory, Robert Rathbun Wilson, was completed in 1972.

The Fermilab Library is located on the third floor crossover of Wilson Hall. Since 1995 the Library has been a unit of the Information Resources Department in the Laboratory Services Section. The Library collection includes over 15,000 monographs and bound journal volumes, principally in the subject area of high-energy physics, with additional materials in astronomy, engineering, environment and safety, and business. The collection also includes over 2,000 preprints (pre-publication papers), including all Fermilab preprints and technical reports, as well as preprints from a variety of other physics and astronomy institutions.

The Fermilab Library catalog was automated during 1991, using the Data Research Associates (DRA) Integrated Library System. Prior to that time, monographs and serials had been cataloged in the cooperative union catalog OCLC, and printed cards had been maintained in a card catalog file. Preprints were cataloged (starting in 1988) in the Stanford (University) Linear Accelerator Center (SLAC) SPIRES-HEP database, a cooperative high-energy physics publications database. (SPIRES stands for Stanford Public Information Retrieval System, HEP for high-energy physics.)

### **II. Authority Control Not Initially Implemented**

Many high-energy physicists write under more than one version of their names. The SLAC Library uses all of these variants in their SPIRES-HEP database, and does not impose authority control. The Fermilab Library continues to catalog all preprints in SPIRES-HEP first, and then ports those records into our catalog. Therefore, as preprints are a significant portion of the collection, we have followed SLAC's practice and not imposed author authority control. When the Library catalog was first automated, authority control was planned as a function that could be implemented later (see "Library Automation Plans," and other unpublished documents by David Ritchie), but shifting priorities (for instance the fulltext files server project) took precedence.

However, more and more Fermilab authors have expressed concern about retrieving all of their citations from the Library online catalog. It is confusing and time-consuming for them to have to execute more than one search to retrieve all of their papers. Many authors have discussed this with the Information Resources Department Manager and with the Library Administrator and other Library staff. This

customer concern, plus the Systems Librarian's and the Library Administrator's concern with the unevenness of the catalog due to lack of authority control, were the drivers for this project.

It was decided to do a pilot project that would create authority records for key Fermilab authors. An authority record establishes the authorized heading and links all variants to that heading. Authority control can be used for authors, place names, proceedings titles, etc. This project was concerned with author authority records. Initially the plan was to create SEE ALSO records for name variants, but that would not solve the problem of having to do more than one search for one author. An authority record can also be used in its complete capacity to reroute any variant name spellings or syntax to the one main record. Functionally this means a searcher can pull up **all** an author's citations with **one** search. This is the approach we took for this project.

### III. Author Authority Control Pilot Project

#### A. Author selection

The first step in developing a list of key Fermilab authors was to run a search on the SPIRES-HEP database to retrieve citations for all the Fermilab "anti-preprints" (published papers) for 1997 and 1998. SPIRES-HEP records are typically created for preprints, but if a preprint is published, the publication citation information is added to the record, creating an "anti-preprint."

The resulting bibliographies were reviewed, and the most prolific and/or the most well known Fermilab authors were highlighted. A total of 43 authors were highlighted from the SPIRES results. Some additional authors, especially those critical to the development of the laboratory but not publishing as much in recent years, were added to the list.

It was determined that the SPIRES-HEP standard syntax for author name initials is to display the initials followed by periods, with no spaces in between the initials. This standard was therefore adhered to for author authority records in the Fermilab catalog.

#### B. Preparation

The Practicum student and the Library Administrator reviewed the DRA manual section on author authority records (*DRA Technical Services User Manual*, chapter 12; St. Louis, MO: Data Research Associates, [date?]). Also studied were the few such records that had been created earlier as an experiment, to determine how to create these records with accurate name variant fields.

The Practicum student also reviewed AACR2R (*Anglo-American Cataloging Rules* 2<sup>nd</sup> ed. Chicago, IL: American Library Association, 1988) to determine standard authority practice. The MARC (Machine-Readable Cataloging) Format manual (*U.S. MARC Format for Bibliographic Data*. Washington, DC: Library of Congress, 1994) was also consulted. It was verified that it is standard practice to use the **most commonly used form** of an author's name as the authorized heading.

Then author searches were performed on the Fermilab Library online catalog, and the resulting lists were printed out. The printouts were reviewed, and the form of the author's name with the greatest number of titles was considered the "most commonly used form" (i.e. the authorized heading). In some instances, the publications were checked to determine if a variant was really for the same person, or not.

There were several instances where two authors shared the same surname and first initial. Because there was no way to differentiate the authors, the one-surname, first-initial variant could not be linked to the correct authorized heading.

### C. Implementation

The DRA NetCat (Network Cataloging) module was used to create author authority records. This work was done under the Library Administrator's login in order to utilize the "global search and replace" function that immediately updates all bibliographic records linked to the authority record.

First an author search was done. A minimal authority record was created by typing A# where # is the search results line number of the form of the author's name with the greatest number of titles.

MARC catalog record 400 fields ("See From" Tracing – Personal Name) were added to this authority record for all the name variants.

Then the author search was redone to ensure that all the variants were listed in the authority record.

Some common problems encountered were names with Jr. or other titles appended (usually in a separate subfield of the record field, but not always), and similarly editor appellations added in subfields or at the end of names. These were corrected or the bibliographic records were edited as necessary.

Final author searches were done via the Web interface, and the search results pages and the authority pages (accessed by clicking the "**about**" tag in the search result record) were printed out for documentation.

Procedures for creating author authority records for the Fermilab online catalog were written. These will be incorporated in the overall cataloging procedure.

### D. Results

A total of 56 author authority records were created or revised in the Fermilab online catalog. An example of a correct author authority record follows.

LEDERMAN

Lederman, L.

Search under: Lederman, L.M.

Lederman, Leon.

Search under: Lederman, L.M.

Lederman, Leon M.

Search under: Lederman, L.M.

Lederman, L.M. ( about) (57 titles)

Since the author authority records used 400 fields and thus pipe all the variant names to the one record, any additions of records with any of these variants will be handled by the online catalog. It is likely that we have included most of the common variants of key Fermilab authors' names, so the database should stay cleaner and more functional for years to come

This project was a success. Therefore an immediate future plan is to implement additional author authority records for the remainder of the authors in the database. Afterwards, authority maintenance should be built in to Library work processes as an ongoing task.