
Access[®] as a Metadata Bridge

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Introduction

The production of metadata for digital objects slated for inclusion in the Colorado Digitization Program's (CDP) *Heritage* database is an essential and often time-consuming process. In order to facilitate the production of metadata, the University of Denver's Penrose Library developed a process that converts the existing descriptive records, regardless of source or format, into the Dublin Core elements. The process uses Microsoft *Access* as a bridge that effects the translation from the existing digital format into the Dublin Core elements. Two examples of this application of *Access* as a translation tool are:

1. Descriptive information on three-dimensional objects in the University's Museum of Anthropology was transferred from a *SNAP* database to the *Heritage* database using *Access*.
2. Data from the University's Beck Archives stored in an *Access* database was reformatted into the Dublin Core elements and transferred to *Heritage*.

In this case study we describe how *Access* serves as a bridge, facilitating the translation of existing descriptive records into Dublin Core elements. The archival and museum records already contained much of the information essential to the creation of robust metadata. They simply needed to be reformatted. The process described eliminates the need to reenter data and assures consistency and accuracy in the production of metadata.

Background

The University of Denver's Penrose Library selected and prepared two collections for initial Internet access: the Beck Archives Photographs and Material Culture Collection and the E.B. Renaud Collection: because of their importance and research potential. The Library's Department of Special Collections and the University's Museum of Anthropology developed a web site that provides access to the research materials and artifacts of anthropologist, E. B. Renaud. The Library's Beck Archives of Rocky Mountain Jewish History joined with the Central Agency for Jewish Education to develop a site devoted to Jewish history that features photographs and objects from Jewish people in the Rocky Mountain West.

Artifacts - In 1932, Professor E. B. Renaud founded the Museum of Anthropology on the University of Denver campus in order to house his collection of artifacts. Over 300 objects collected by Renaud were selected by the Museum for the digitization project. These artifacts include projectile points, triangular wooden snares, bone beads, shaft tools, and pendants.

Textiles and Objects - The Material Culture Collection highlights textiles and objects that reflect the history and culture of the Jewish community in Colorado primarily in the early 1900's. The collection features Jewish religious objects such as a Torah mantle, tefillin bags, a challah cover, and a prayer shawl. The collection also includes men's and women's clothing and their accessories, children's clothing, and women's jewelry. The collection features handmade household linens including table runners, doilies, and a coverlet. Medical instruments and apparatus used by members of the Colorado Jewish community are part of the collection. The collection also includes a diary, decorations from a 50th wedding anniversary, a World War II ration book, flags, a samovar set, and a suitcase as well as a number of books.

The Challenge

Selected metadata were available for the three-dimensional objects featured in both collections. In the Museum these data were stored in a *SNAP* database while the Archives utilized an *Access* database for that purpose. The similarities between the Museum information and a library catalog record were stunning. The information contained in each system was similar, however they differed mostly in the way they were formatted. Clearly, the cost and time required to reenter these data could be avoided in a process could be developed to reformat these records. The Material Culture Collection (Beck Archives) had particularly lengthy descriptions that would have required significant effort to maintain consistency and accuracy, if the data were reentered. Fortunately, the Beck Archives had employed cataloging standards in the development of their database. Thus, the description, title and keyword elements were already in place. The Reference Department requested that the images of three-dimensional objects remain in a separate image database and not be included with the library catalog. This meant that a MARC record was not necessary for the three-dimensional objects and the project could utilize a Dublin Core record employing the CDP database, *Heritage*, as its image database.

Key Actors

The project team that developed the metadata translation tool included: a project manager, a staff member familiar with *Access* and other relational data bases, the Museum Curator, and support staff from the Archives, Special Collections, and Cataloging Departments. Their roles on the team were as follows:

- Project manager – provided overall project direction, assisted with mapping SNAP database and Archives database to Dublin Core elements.
- Database resource staff – created relational database and transferred data to the CDP.
- Archives and Museum staff – completed research for each object
- Cataloging staff – provided subject analysis and verified research when possible.

- Museum curator – provided guidance for museum research and subject analysis

The Colorado Digitization Program’s workshops, best practices, equipment, software, and staff provided the toolbox to complete the project. Resource personnel from the CDP shared their expertise to ensure a quality product.

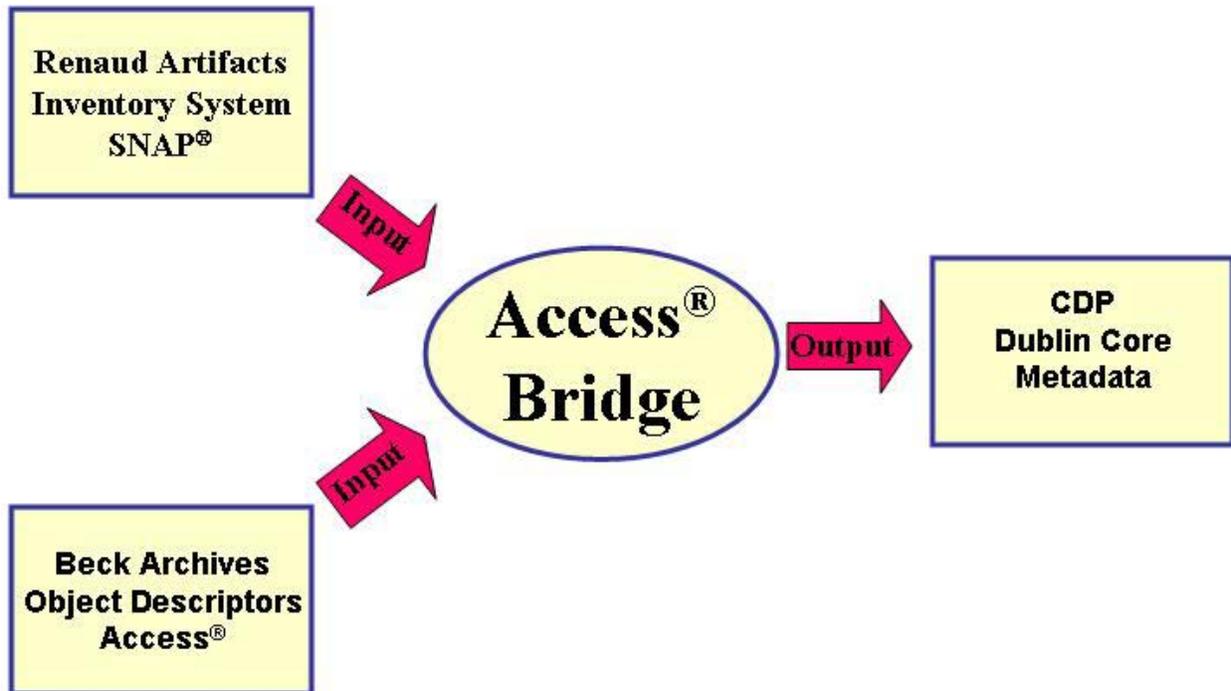
Methods/Procedures Used

All records of individual images for the three-dimensional objects followed the Metadata Guidelines developed by The Colorado Digitization Program.

The original museum artifacts associated with the Renaud Collection were cataloged in a museum inventory system (SNAP). The Museum of Anthropology data were output to the CDP template via an *Access* database. This relational database was designed to follow the CDP template using Dublin Core. A professional cataloger added data to fit the Dublin Core elements and applied the use of “constant data” (i.e. all Publisher elements were populated with the University of Denver, Penrose Library.) The cataloger created subject headings in the *Access* database employing *Library of Congress Subject Headings* (LCSH) as well as the *Revised Nomenclature for Museum Cataloging, a Revised and Expanded Version of Robert G. Chenall’s System for Classifying Man-made Objects*. These records are available through *Heritage*, the Colorado Digitization Program’s database.

The Beck Archives Material Culture Collection was part of a larger *Access* database used for management purposes by the Archives. This original database was turned over to a costume researcher to verify and certify the information relating to the costumes. Because subject analysis is time-consuming and because the staff had no experience in creating subject headings for three-dimensional objects, a copy of this database was also given to a professional cataloger early in the project. The cataloger created subject headings utilizing the *Thesaurus of Graphic Materials* (TGM), *Art & Architecture Thesaurus* (AAT), and *Library of Congress Subject Headings* (LCSH). The subject headings were created in a *Word* document. When the costume researcher completed her part of the project, the subject headings were rechecked by a cataloger to make sure they were still accurate and to augment the headings if necessary. The cataloger also vetted the title to make sure it accurately reflected any changes made by the researcher. Portions of that database relating to the Material Culture Collection were then mapped to an *Access* database that was set up in the Dublin Core element set. Fortunately the original database was created with the assistance of the Cataloging Department so it included title, description, and keywords.

Metadata Development Using Data Translation



The staff worked to refine the *Access* database so that it fulfilled the definitions of the Dublin Core adding technical metadata and the constant data similar to the previous project. Once the information was set up in the Dublin Core template in the *Access* database, it was transferred to the Colorado Digitization Program's Metadata Entry templates. Final work on the records was accomplished in the CDP data entry site. A staff member performed the data entry for the subject headings that were created by the cataloger in the *Word* document. The headings were quickly added to the CDP Dublin Core Builder. The staff member also added the individual scanning metadata that was in documents supplied by the Archives staff. All URLs were checked and adjustments made as needed. Each of these records is available through the Penrose Library online catalog and through *Heritage*, the Colorado Digitization Program's database.

Metadata for Beck Archives Material Culture Collection

The template below was used to map data from the original Beck Archives **Access** database to the Dublin Core *Access* database. The Dublin Core database was then output to the CDP. All elements marked with an asterisk hold constant data that remains the same for every record; some elements have one or two variables within the constant data.

Title: Variable from database

*Identifier 1 : <http://www.penlib.du.edu/specoll/beck/XXXX.htm>
[The XXXX is the file name/accession number of the original object]
*Identifier 2: <http://www.penlib.du.edu/specoll/beck/XXXX.htm>
Identifier 3 Variable from database [This is the accession number for the object.]
Creator: [Variable, but most objects had no information to populate this element]
Contributor: Variable from database
*Publisher Penrose Library, University of Denver
Description: Variable from the database.
Subject 1: Analysis performed by cataloger; heading entered manually by staff.
Subject 2: Analysis performed by cataloger; heading entered manually by staff.
Subject 3: Analysis performed by cataloger; heading entered manually by staff.
Language1: Variable from database
*Format-Use: Available via the World Wide Web
*Format-Creation: Epson Expression 836 XL Scanner with Adobe Photoshop version 5.5 ;
XXX dpi ; 1 file: XXX bytes [XXX data manually input from scanning documentation]
Date Digital: Format will be YYYY-MM-DD [Manually input from scanning documentation]
Date Original: Variable from database
*Type 1: physical object [Refinement selected from a pull down menu; manually added]
*Relation: Material Cultural Collection, Ira M. Beck Memorial Archives of Rocky Mountain
Jewish Historical Society, Special Collections Dept., Penrose Library, University of Denver,
Denver, Colo.
[Refinement: “is part of” selected from a pull-down menu; manually added]

Recommendations

All work should be completed in the *Access* database if possible before it is sent to the CDP so that an archival copy of the metadata is retained by the institution. Since only one person can work with the *Access* database at a time, this may be a drawback when working with project deadlines. The best practice for the successful completion of the project is to complete the research before the project begins and perform subject analysis on the objects early in the project. Early completion of research eliminates the stress factor related to performing subject analysis of the objects, leaving only the task of data-entry to be completed in the final stages of the project.

Summary

The three-dimensional objects from the Renaud Collection and the Beck Archives Material Collection are described in Dublin Core records with access through the CDP *Heritage* database. Both projects parlayed databases already in existence to assure consistency and accuracy in the production of metadata. The project used an *Access* database that served as a bridge, facilitating the translation of existing descriptive records into Dublin Core elements. By separating the project among various members of the staff at difference phases, the work progressed. A Team

approach for the metadata involving the research of the Archives staff and subject analysis and data entry from the Cataloging Department allowed the project to be completed on time.

Resources

Colorado Digitization Project, Metadata Guidelines, 1999. <http://coloradodigital.coalliance.org>

Dublin Core Metadata Initiative. <http://dublincore.org>

Zang, Marcia Lei. 1999. Metadata elements for object description and representation: A Case Report from a Digitized Historical Fashion Collection Project. *Journal of the American Society for Information Science*. 50(13):193-1208, 1999.

Library of Congress Subject Headings

The Revised Nomenclature For Museum Cataloging: A Revised and Expanded Version of Robert G. Chenhall's System for Classifying Man-Made Objects (Nashville, TN: American Association for State and Local History, 1988).

Colorado Digitization Project, Metadata Guidelines, 1999. <http://www.cdheritage.org/metadata/>

Thesaurus of Graphic Materials

Art & Architecture Thesaurus

Key Contact

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