

Library Resources & Technical Services

ISSN 2159-9610
January 2023
Volume 67, No. 1

Using the Homosaurus in a Public Library Consortium: A Case Study
Rachel K. Fischer

Documenting Classification Systems: A Case Study and Considerations
Christopher Straughn

Community Forward: Developing an Open and Free Cataloging Standard for Rare Materials
kalan Knudson Davis, Jessica Grzegorski, Elizabeth Hobart, and A. Tims



Core

LEADERSHIP
INFRASTRUCTURE
FUTURES

Library Resources & Technical Services

ISSN 2159-9610

January 2023

Volume 67, No. 1

Editorial

Rachel Scott and Michael Fernandez

2

FEATURES

Using the Homosaurus in a Public Library Consortium

A Case Study

Rachel K. Fischer

4

Documenting Classification Systems

A Case Study and Considerations

Christopher Straughn

16

NOTES ON OPERATIONS

Community Forward

Developing an Open and Free Cataloging Standard for Rare Materials

kalan Knudson Davis, Jessica Grzegorski, Elizabeth Hobart, and A. Tims

26

Book Reviews

37

Cover image: Tatras Mountains in winter at night and falling stars, Poland. shaiith/ Adobe Stock.

Library Resources & Technical Services, <https://journals.ala.org/lrts> (ISSN 2159-9610) is published quarterly by the American Library Association, 225 N. Michigan Ave., Suite 1300, Chicago, IL 60601. It is one of three official publications of Core: Leadership, Infrastructure, Futures, a division of the American Library Association. Submit manuscripts using the online system at <https://journals.ala.org/index.php/lrts/login>. Rachel Scott, Editor, *Library Resources & Technical Services*; rescot2@ilstu.edu. Advertising: Core: Leadership, Infrastructure, Futures, 225 N. Michigan Ave., Suite 1300, Chicago, IL 60601; 312-280-5038; fax: 312-280-5033; core@ala.org. ALA Production Services: Tim Clifford and Lauren Ehle.

Library Resources & Technical Services is indexed in Library Literature, Library & Information Science Abstracts, Current Index to Journals in Education, Science Citation Index, and Information Science Abstracts. Contents are listed in CALL (Current American—Library Literature). Its reviews are included in Book Review Digest, Book Review Index, and Review of Reviews.

Instructions for authors appear at <https://journals.ala.org/index.php/lrts/about/submissions#authorGuidelines>. Copies of books for review should be addressed to Michael Fernandez, Yale University Library, PO Box 208203, New Haven, CT 06520-8203.

© 2023 American Library Association

All materials in this journal are subject to copyright by the American Library Association and may be photocopied for the noncommercial purpose of scientific or educational advancement granted by Sections 107 and 108 of the Copyright Revision Act of 1976. For other reprinting, photocopying, or translating, address requests to the ALA Office of Rights and Permissions, 225 N. Michigan Ave., Suite 1300, Chicago, IL 60601.

Publication in *Library Resources & Technical Services* does not imply official endorsement by Core nor by ALA, and the assumption of editorial responsibility is not to be construed as endorsement of the opinions expressed by the editor or individual contributors.

LRTS was available in print (ISSN 0024-2527) from 1957 through 2014. Single print issues from volume 38 through volume 58 can be purchased for \$30 each. Contact core@ala.org with purchase requests.

Visit *LRTS* online at <https://journals.ala.org/lrts>.

EDITORIAL BOARD

Editor and Chair

Rachel Scott, *Illinois State University*

Assistant Editor

Michael Fernandez, *Yale University*

Members

George E. Gottschalk, *University of Illinois, Urbana-Champaign*

Tina Gross, *North Dakota State University*

Ellen T. McGrath, *University at Buffalo, The State University of New York*

Heylicken (Hayley) Moreno, *OCLC*

Jeff M. Mortimore, *Georgia Southern University*

Valentine K. Muyumba, *Indiana State University*

Kavita Mundle, *University of Illinois at Chicago*

Juleah Swanson, *University of Colorado Boulder*

Thomas H. Teper, *University of Illinois at Urbana-Champaign*

Harriet Wintermute, *Iowa State University*

Ex-Officio Members

Julie Reese, Interim Deputy Director, Core

Editorial

Open to Opportunity

Rachel Scott and Michael Fernandez

If you're reading this, then you're doing so without hitting a paywall or login prompt, which is truly exciting for us, as we can now officially declare *Library Resources & Technical Services (LRTS)* to be open access (OA). While every issue of *LRTS* can be classified as "long in the making," this issue is particularly so. The pathway to open has been a long one and has involved a good deal of hard work behind the scenes at ALA/Core, with much of that work ongoing. The decision to make *LRTS* open pre-dates our tenure as editors and much of the efforts of the past year have been in planning for the sustainability of an OA model. Along the way we've encountered a lot of the nuts and bolts of OA, including platform considerations, marketing and outreach, budgeting, and fundraising. Oh, and on top of all that, we have a journal to edit! While the work has been interesting and gratifying, we are also happy to focus on our primary editorial duties knowing that the excellent leadership at ALA/Core is supporting the ongoing efforts to keep *LRTS* open.

Openness is integral not only to the values of libraries, but to the work of librarians as well. This is increasingly seen in all of the functional areas that are the topical focus of the journal: collections, scholarly communication, preservation, acquisitions, continuing resources, and cataloging. Collections of OA journals and books continue to proliferate, offering opportunities to diversify and enrich library collections. OA models also proliferate, requiring that the implications for scholarly communication are thoughtfully considered. In the area of technical services, open resources pose unique issues for access and discoverability, and in the area of acquisitions, developing models such as subscribe to open are funded through library collection budgets. We feel that *LRTS* is an ideal venue for discussing issues surrounding openness in technical services, collection development, and scholarly communication. Last issue's editorial featured a call for article contributions to a special themed issue of *LRTS* dedicated to open access topics. The plan is to publish that issue at this time next year to commemorate our first year of being fully open. For authors who are looking to publish on OA topics in library operations, or those who want to present their technical services article in an OA venue to reach as wide an audience as possible, we hope you will consider writing for *LRTS*.

We'd like to also use this space to acknowledge the massive amount of work that has gone into making this publication open. The previous editorial team at *LRTS* laid the groundwork for this transition, providing us with a solid foundation to build on when we took the reins. Our editor colleagues at *Information Technology and Libraries* and *Library Leadership & Management*, both of which have long been OA, have been insightful and valuable collaborators in ongoing discussions of unifying practice across the three Core journals and investigating a shared hosting platform. The leadership at Core has been instrumental in the move to open, and we also want to acknowledge their contributions of an overall vision and continued guidance. Finally, we'd like to individually recognize Brooke Morris-Chott, Core's former Advocacy EDI Program Officer, who did much of the behind-the-scenes work of coordinating communication among various groups and has been instrumental in this process. Sadly (for us), Brooke recently left ALA/Core to pursue

exciting new opportunities, but this publication is very much one of the fruits of her tireless efforts.

Now that *LRTS* is fully open, we're excited about continuing to publish high-quality, thought-provoking articles, as we hope you are equally excited to read them. We know that as practitioners in library work, you also value making knowledge open to everyone. We also want you to know you can take an active role in ensuring that this and other Core publications remain open by making a donation to Core's Open Access Campaign. Any and all contributions are appreciated, and we truly hope you'll consider giving to help us continue to make our content freely available to everyone, everywhere.

In this issue:

- Rachel K. Fischer offers a case study describing implementing *The Homosaurus: An International LGBTQ+ Linked Data Vocabulary* in a public library consortium. Fischer provides an overview of how the consortium made the case for using *Homosaurus*, gained approval from member libraries, and crafted a cataloging manual. This article makes a strong case for using alternative controlled vocabularies and provides a detailed guide for librarians looking to do so.
- Christopher Straughn shares the documentation created for an implementation of a system for describing publications of the State of Illinois. The article has implications for technical services documentation more broadly. By creating documentation that is flexible, accessible, and user-oriented, Straughn argues, librarians are poised to take advantage of a variety of unexpected benefits. For example, creating documentation allowed librarians at Northeastern Illinois University to produce a near complete listing of Illinois publications and provided the basis for a structural history of Illinois government.
- kalan Knudson Davis, Jessica Grzegorski, Elizabeth Hobart, and A. Tims describe the work of the Descriptive Cataloging of Rare Materials (RDA Edition) (DCRMR) Editorial Group and their community- and sustainability- driven methods for developing an open-source cataloging standard for rare materials. The authors discuss earlier standards, the principles and constraints in which they worked, the methods and technical tools employed, and future directions.
- Book reviews

Using the Homosaurus in a Public Library Consortium

A Case Study

Rachel K. Fischer

Library of Congress Subject Headings (LCSH) on LGBTQIA+ topics have not evolved alongside the frequently changing vernacular vocabulary used to access resources on the topics. To rectify this issue, libraries can choose to use an alternative controlled vocabulary, like The Homosaurus: An International LGBTQ+ Linked Data Vocabulary. This case study provides an overview of how Cooperative Computer Services (CCS), a public library consortium in Illinois, made the case to allow the Homosaurus in the CCS catalog, gained approval from the member libraries, and crafted a cataloging manual section. Other libraries can follow the recommendations in this article on how to properly make the case for the approval of a policy to allow an alternative controlled vocabulary in their catalog.

According to a Gallup poll from 2022, the lesbian, gay, bisexual, and transgender (LGBT) population in the United States increased from 5.6 percent in 2020 to 7.1 percent. While the percentage is stable in older Americans, the percentage of LGBT Gen Z Americans has increased from 10.5 percent in 2012 to 20.8 percent, and the percentage of LGBT millennials has increased from 5.8 percent in 2012 to 10.5 percent.¹ Such a large increase means that the LGBT community will become even more visible than in previous generations; more resources will be published on lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual, and more (LGBTQIA+) topics, and media will feature LGBTQIA+ issues more frequently. This means that librarians will see an increase in the number of patrons that seek access to materials on LGBTQIA+ topics. An important part of this process is ensuring that the bibliographic records are sufficiently cataloged with subject headings that represent the terminology used by the LGBTQIA+ community to describe themselves. Regardless of whether one is a member of the community or not, the vernacular vocabulary to describe relevant topics is used more frequently than scientific or dated terms. If bibliographic records do not include the terms that patrons search for, the materials they need will be hidden and inaccessible when they are needed the most. However, Library of Congress (LC) has not sufficiently prepared for this inevitable need by updating the archaic Library of Congress Subject Headings (LCSH) terms like “Sexual minorities” and “Gays” or adding in appropriate scope notes, so catalogers know how to apply terms to records.² It is time for catalogers to devise their own solution while they continue to lobby the Subject Authority Cooperative Program (SACO) to appropriately update LCSH.

To make bibliographic records on LGBTQIA+ topics more accessible, the member libraries of Cooperative Computer Services (CCS), a public library consortium in Illinois, approved a policy to allow The Homosaurus: An International

Rachel K. Fischer (rfischer@ccslib.org) is the Member Services Librarian for Technical Services at Cooperative Computer Services (CCS). She has an MLIS from Dominican University and an MSM from Minot State University. Rachel has published articles in *Public Library Quarterly*, *Library Hi Tech*, *Reference and User Services Quarterly*, and *Library Journal*.

This article is an expanded version of a presentation that was previously presented at the Core Cataloging & Classification Research Interest Group Meeting, Virtual Interest Group Week, July 28, 2021.

LGBTQ+ Linked Data Vocabulary in the CCS catalog. The Homosaurus is a controlled vocabulary that has been available for free online at <https://homosaurus.org/> since 2019 but was originally derived from *A Queer Thesaurus: An International Thesaurus of Gay and Lesbian Index Terms*, a Dutch/English thesaurus.³ This controlled vocabulary can be used to supplement the LCSH terms when a term does not fully represent the material being cataloged. This case study documents the research and decision-making process CCS staff and member libraries used to approve the policy for allowing the Homosaurus and the local cataloging practices as documented in the CCS cataloging manual. Recommendations for other libraries and consortiums that are interested in allowing the Homosaurus or other alternative controlled vocabularies are provided that will help librarians gain buy-in from staff and administrators at their institutions.

Literature Review

Prior to LC's distribution of the first printed cards in 1901, cataloging was costly, inefficient, and not standardized. In conjunction with the American Library Association (ALA), LC standardized cataloging rules and the use of LCSH. Due to the costliness of cataloging, libraries of all sizes could not afford subject catalogs until the advent of the distribution program. The printed cards solidified LC's future as the expert on national standards.⁴ In the second half of the twentieth century, LC's efforts to make cataloging more efficient evolved to allow cooperative cataloging with the use of the OCLC database and the creation of the cooperative cataloging programs (PCC, CONSER, SACO, NACO, and BIBCO). Without the national and international standards that Program for Cooperative Cataloging (PCC) participants follow, the quality of records in OCLC would be greatly diminished.⁵

Since the creation of the Subject Authority Cooperative Program (SACO) in 1992, librarians have been able to propose new subject headings and revisions to LCSH to contribute to the evolution of the controlled vocabulary. SACO Funnel, which are groups of librarians that work together on subject heading proposals for specific topics, have been important in the promotion of inclusive subject headings. For example, the African American Funnel Project successfully submitted proposals to add headings like "Black wall streets" and "Afrofuturist fiction."⁶ To facilitate the creation and revision of LCSH for LGBTQIA+ topics, the Gender and Sexuality Funnel was just formed in 2022.⁷

Despite the efforts of the funnels to lobby for more inclusive terms, not all proposals are successful. Such a broad controlled vocabulary, like LCSH, does not meet the needs of all communities. Numerous specialized controlled vocabularies have been created to better represent specific ethnic groups, specialized topics, occupations, and time periods. The list of

subject vocabularies that can be used in bibliographic records in the OCLC database is included on a site titled "Subject Heading and Term Source Codes."⁸ Because LCSH has been known to include out-of-date or infrequently used terms on LGBTQIA+ topics, some libraries and archives have chosen to utilize other controlled vocabularies or local subject headings. Recently published articles on LGBTQIA+ subject headings continue to critique LC or SACO and advocate for updating LCSH. While some articles recommend solutions, few researchers have published practical solutions that can be implemented in public libraries.

Critique of LCSH Terms on LGBTQIA+ Topics

The momentum to update sexist and homophobic LCSH terminology began with a panel discussion sponsored by the Task Force on Gay Liberation at the 1971 American Library Association (ALA) Annual Conference in Dallas.⁹ The publication of Sandy Berman's *Prejudices and Antipathies: A tract on the LC Subject Headings Concerning People* in 1971, as well as his and his colleagues' work at the Hennepin County Library to create local subject headings, were influential in SACO's efforts to update LCSH.¹⁰ Yet lobbying SACO to update LCSH is a time-consuming process that is frequently unsuccessful. LC made several updates to LGBTQIA+ terms in the 1990s and early 2000s. However, some of these changes were viewed as a compromise between the old status quo and the suggested term.¹¹ The current LCSH terms have been described as inconsistent and out-of-date.¹² This can make it difficult for patrons to access material when searching with the currently used vocabulary.

As of 2011, Ellen Greenblatt listed two major points of critique that have not been corrected.¹³ First, the term "Gays" is currently used as an umbrella term for gay men and lesbians. This is not the commonly used umbrella term for LGBTQIA+ individuals. Greenblatt notes that users may not understand the difference between gay men and gays. She states that "by using gays as an umbrella term to encompass both gay men and lesbians, LCSH is contributing to the longstanding issue of lesbian invisibility."¹⁴ This act marginalizes the LGBTQIA+ community. Second, LCSH conflates the meaning of sex and gender. This is evident in the "use for" terms. For example, "Sex" should be used for both "Gender (Sex)" and "Sex (Gender)." "Gender identity" is used for "Sexual identity (Gender identity)," while "Sexual minorities" is used for "Gender minorities." Further conflating the difference between sex and gender are the narrower terms under "Gender identity" which include both intersex, transgender, and transexual terms. This does not consider the contemporary definitions of sex or gender, of which sex is defined as biology and gender as a societal construct.¹⁵

Additionally, several authors have commented on the lack of the subject heading "Queer" to accompany the LCSH

term “Queer Theory.” While the term “queer” is frequently used as an umbrella term for people who are not straight and not cisgendered (identifying with the gender assigned at birth), it has also been used by those who reject labels for gender identity and sexual orientation.¹⁶ However, LC chose to only create the term “Queer Theory” because of the history of the term being used as an offensive word.¹⁷ The stylebook for the *NLGJA: The Association of LGBTQ Journalists* notes that the word “queer” should be used with caution because of the offensive nature of the term. When it is used, an explanation should be provided.¹⁸

The popularity of the term “queer” as a search term can be easily identified by using Google Trends to compare the number of searches to the umbrella terms available in LCSH. From comparing the amount of Google searches using Google Trends for the search term “queer” to “gays” and “sexual minorities,” one can see that the term “queer” is twice as popular on average as the term “gays.” Whereas the term “sexual minorities” is rarely ever searched outside of the more populous states.¹⁹ The usage of “queer” as an identity term has become so prolific that the case for literary warrant can be made. National Public Radio uses the term “queer” when an individual identifies as queer to respect the person’s identity.²⁰ K. R. Roberto postulated, “If there are no queers in LCSH, what does Queer theory study?” Roberto believes the lack of inclusion of the term “queer” is an inherently political act to create a space that only values clearly delineated identities.²¹ J. L. Colbert acknowledged how challenging the term “queer” is for controlled vocabularies. The term’s fluid nature makes it difficult to define and apply scope notes to. It may not be defined in the same manner ten years from now. Without appropriate scope notes, it can be difficult for catalogers to decide how to apply terms. Given this problem and the fact that people do search for the term “queer,” Colbert questioned what librarians should do about the term.²²

The lack of inclusion of the term “queer” as an identity term is just one example of how LCSH does not accurately represent the LGBTQIA+ community and the terms that researchers search with. It is well known that LCSH terms are out-of-date, inconsistent, and updated too slowly or not at all.²³ Although added recently, the term “Gender non-conforming people” represents a bias that depicts the stereotypes of the gender binary system and is not the term most frequently searched for when researching non-binary people.²⁴ The lack of headings for identities like pansexual people make it impossible for library users to search for material on this topic, especially if it has not been included in the summary.

There has been one notable study that compares the vocabulary used by patrons who research LGBTQIA+ topics to LCSH terminology. Colbert studied the searching habits and relevancy of search results from gender and women’s studies professors at the University of Illinois Urbana-Champaign

using a semi-structured interview technique.²⁵ Colbert noted that the participants felt frustrated that they needed to alter their searches with different terms depending on the nature of the research and discipline. While the participants did search for some terms that are included in LCSH, they searched for many terms that are not LCSH, including but not limited to: “fairy,” “men who love men,” “mlm,” “queer,” variations on the LGBT acronym, “women who are only attracted to women,” “trans,” “bi,” “pansexual,” and “queer community” or “LGBT community.” The researchers preferred to begin their search outside of the library catalog while only returning to search in the catalog for a known item.²⁶ As librarians, we would like to train students and patrons to use the library catalog as it was meant to be used, to take advantage of the ability to collocate materials by subject headings. Yet this effort will not provide any benefit to patrons if the controlled vocabulary does not reflect the vocabulary used by the community that it serves.

Charles A. Cutter, a nineteenth-century librarian who influenced LC, commented on synonyms and the choice of a synonym for a subject heading in *Rules for a Dictionary Catalogue*. Cutter colorfully described the need to look for synonyms when researching a topic as an “evil.” He recommends choosing the synonym that “is most familiar to that class of people who consult the library; a natural history society will of course use the scientific name, a town library would equally of course use the popular name.”²⁷ Recently, Brian Dobreski, Karen Snow, and Heather Moulaison-Sandy compared terms describing LGBTQIA+ identities in LCSH and Library of Congress Demographic Group Terms (LCDGT) to the Homosaurus identity terms to see how representative the LC headings were of the LGBTQIA+ community. The identities included in LCSH and LCDGT overlap with the identities represented by Homosaurus by about 25 percent. This analysis found that traditional controlled vocabularies only represent a small portion of identities that are necessary to fully support the LGBTQIA+ community.²⁸ By not updating LCSH terms to include vocabulary used contemporaneously, the LGBTQIA+ community is being marginalized. Whether one is or is not a member of the LGBTQIA+ community, the materials necessary for research on relevant topics are less accessible or even hidden because of the lack of appropriate subject headings.

Potential Solutions

It is important for libraries to devise their own solutions that meet the needs of their communities to provide easier access to the materials that they need. The recommendations fall into two categories: an educational approach that does not affect the catalog and a hands-on approach to changing the subject headings and how the catalog functions. Sara A. Howard and Steven A. Knowlton, of Princeton University, created a LibGuide of subject headings, classification numbers,

important people, and LGBTQIA+ organizations.²⁹ Since public libraries do not usually use LibGuides, the institutions would have to create a webpage or recommended resources list and market it on their website. Emily Drabinski believes that a queer approach should highlight the problems of the classification and subject headings through a pedagogical approach that engages users in a dialog about the catalog that asks them to consider “how the organization of, and access to, knowledge is politically and socially produced.”³⁰ While this pedagogical technique is a great way to engage students in university classrooms, such an analysis could not be expected at the public services desk in a public library unless a patron specifically asked about the subject headings. Although Drabinski recommends leaving the existing structure of classification and subject headings intact, she supports the idea of a technical solution like allowing user tagging in the catalog.³¹

Melissa Adler compared the use of user-generated tags in LibraryThing to subject headings in WorldCat records for books on transgender topics. The study found very little overlap between the tags, or folksonomies, and the subject headings. Although tags are not controlled and less precise, Adler points out that folksonomies are more representative of minority and marginalized voices. Because of the lack of precision of user-generated tags, Adler recommends the usage of controlled vocabularies and user-generated tags simultaneously.³² Tagging has not become ubiquitous with online public access catalogs (OPACs) yet. Therefore more research needs to be done into the benefits of tagging and the ramifications that the appearance of inappropriate or junk tags could have on library catalogs.

A highly technical example of a solution has been piloted by libraries in Knoxville, Tennessee, and San Francisco, California, in conjunction with Libraries as Models for Building Diversity Achievements (LAMBDA). The researchers created a crosswalk ontology to assist homeless LGBTQ youths when searching the library catalog.³³ An ontology is a way to organize a subject in a manner that depicts the relationship between one topic and another. The goal of the project was to create a more empathetic ontology for OPACs so that the search algorithm could improve the search results related to the terms that the homeless youth search with. By interviewing the community, Frances Nichols and Edwin M. Cortez were able to identify the most used natural language vocabulary. The team created a model that connected that vocabulary to the controlled vocabulary of the library catalog in a way that the catalog could improve the search results and suggest positive references geared towards rehabilitating the community.³⁴ A similar endeavor was recently undertaken at Indiana University for the LGBTQ+ Culture Center with the goal of mitigating the problems that marginalized and potentially harmful language can cause.³⁵ The proof-of-concept retrieval aid was designed by linking the Homosaurus terms to the equivalent LCSH terms. When searching for

a Homosaurus term with an exact match to an LCSH term, the system executed the search for the LCSH term. When an exact match cannot be made, a keyword search is executed. This is an ongoing project.³⁶

These two projects are too technical and time-consuming for most public libraries to endeavor. An open-source integrated library system (ILS) is required to make home-grown changes that alter the ontology and manner that searches are executed. However, additional research into how an ILS can be customizable to meet the needs of the community is warranted. The closest functionality in existence is Ex Libris Alma and Primo’s ability to allow libraries to map LCSH to preferred terms so that preferred terms can appear in the records in the Primo discovery layer to the patrons while either LCSH or the preferred terms can be searched with. Including ILS vendors in this research on ontologies could create much more powerful and inclusive OPACs for public libraries.

The most practical and controlled solution for public libraries is to adopt the usage of an alternative controlled vocabulary to include in bibliographic records alongside LCSH. Inclusion of controlled vocabularies that were created by marginalized groups better represents the community and can improve access to resources that meet their needs. Dobreski, Snow, and Moulaison-Sandy’s research provided evidence that “supplemental controlled vocabularies can help libraries meet the needs of various identity groups.”³⁷ Currently, there are six controlled vocabularies included in LC’s list of Subject Heading and Term Source Codes that are the most relevant to LGBTQIA+ topics.³⁸ The source code is a code that can be added to a bibliographic record that states the vocabulary that a term came from. Catalogers can choose to add terms from these thesauri to records in OCLC and the local library catalog if it has been properly approved by the library’s administration to appear in the OPAC. The controlled vocabularies including LGBTQIA+ topics include the following:

- Gender, sex, and sexual orientation (GSSO) ontology
- Gay studies thesaurus: a controlled vocabulary for indexing and accessing materials of relevance to gay culture, history, politics and psychology
- Homosaurus: an international LGBTQ linked data vocabulary
- International thesaurus of gay and lesbian index terms
- A queer thesaurus: an international thesaurus of gay and lesbian index terms
- Sexual nomenclature: a thesaurus

Other published and unpublished controlled vocabularies that include LGBTQIA+ terminology have been created that are on broader topics, like women’s studies, or have not been assigned source codes.

The oldest controlled vocabulary in LC's list of approved vocabularies that includes LGBTQIA+ terminology is *Sexual Nomenclature: A Thesaurus*. This thesaurus was based on the organization of the Kinsey Institute Library in the 1940s and 1950s and gay and lesbian activism in the 1960s and 1970s. It was created by the librarians at the Kinsey Institute at Indiana University in 1976 to make "subversive materials" more accessible, but was not accepted by LC until 2006. However, the thesaurus has not been updated with the most recent terminology and lacks the term "transgender."³⁹

The *Gay Studies Thesaurus* was self-published by Dee Michel in 1985. It was developed using books and periodical resources while the author was in graduate school. This thesaurus was used by the ONE Institute of Los Angeles that was overseen by the University of Southern California.⁴⁰ It is also being used by the Lavender Library Archives and Cultural Exchange alongside LCSH.⁴¹ Although this thesaurus was widely known, the publication is not widely held by libraries. Because it was self-published nearly forty years ago, the vocabulary will not have been updated with the latest terminology. It is not easily accessible for libraries that are interested in using supplemental controlled vocabulary due to its limited availability. *The International Thesaurus of Gay and Lesbian Index Terms* was completed in 1988 by ALA's Task Force on Gay Liberation. The effort to create the Index began in 1986 when the Task Force chose to merge multiple controlled vocabularies into one thesaurus. This controlled vocabulary was never published, so it was not adopted widely by catalogers.⁴² Given its unpublished status it is not held by many libraries, so it is not easily accessible to catalogers today.

A *Queer Thesaurus: An International Thesaurus of Gay and Lesbian Index Terms* is a Dutch/English thesaurus that was developed for the collections of the HOMODOK and the Anna Blaman Huis (now the Internationale Homo/Lesbisch Informatiecentrum en Archief or IHLIA). It was published in 1997 and can still be found in some libraries in the United States.⁴³ Jack van der Well and Ellen Greenblatt initially used *A Queer Thesaurus* to create *The Homosaurus: An International LGBTQ+ Linked Data Vocabulary* in 2013 by expanding the terms. In 2015, K. J. Rawson of the Digital Transgender Archive worked with van der Wel to expand the terms further and turned it into a linked data vocabulary.⁴⁴ It has been online since May 2019 and is updated twice a year by an editorial board in June and December.⁴⁵ This vocabulary is easily accessible online at <https://homosaurus.org>. Catalogers can easily suggest new terms via the Homosaurus website. Because it is so accessible, public and academic libraries have begun to use it to supplement or replace LCSH terms in their catalogs more widely than the other alternative vocabularies. Adrian Williams presented at the 2021 LD4 Conference on Linked Data on the inclusion of Homosaurus terms in the University of Kentucky catalog. They commented that it had a positive effect on the searching experience.⁴⁶

They have already added a significant amount of Homosaurus terms to records in OCLC as part of an enhancement project.⁴⁷ Several Cataloging manuals can already be found online that include policy statements on the Homosaurus. These include, but are not limited to, Harvard University's Schlesinger Library, CCS, and Schaumburg Township District Library in Illinois.⁴⁸

The GSSO is an ontology that bridges the gap between linguistic variations within and outside the health care field. Its focus is LGBTQIA+ vocabulary but also includes broader terms. It was initially published on BioPortal in 2019. The creators of this ontology have included the LGBTQIA+ terminology that members of the community currently use.⁴⁹ Although the vocabulary is regularly updated, its scientific focus may benefit health, medical, or science libraries and archives the most. This ontology can be easily searched online on the OLS Ontology Search website at <https://www.ebi.ac.uk/ols/ontologies/gssso>. This site has useful definitions and links to other sites like the Homosaurus and Wikipedia, which could make it a useful resource for catalogers from all types of libraries. However, the broader, narrower, and related terms are not as comprehensive as Homosaurus.

Because technical solutions, like enhancing the search capabilities of an OPAC with an ontology crosswalk, are not available for all ILS vendors, additional research on ILS customization should be conducted in conjunction with ILS vendors. Public libraries can only benefit from desired customizations if the vendors that public libraries use are willing to incorporate these ideas into the OPAC. In the meantime, it is important for librarians to publish articles on practical solutions for public libraries that can mitigate the problem of biased terms in controlled vocabularies. The most viable solution for public library catalogers is to allow for the usage of the Homosaurus because it is readily available online and regularly updated by an editorial board. This article fills in the gap in the research by documenting how a public library consortium approved the policy to allow the Homosaurus and craft a detailed cataloging manual section for the usage of the vocabulary.

The Library Consortium

Cooperative Computer Services (CCS) is a consortium of twenty-eight public libraries in the northern and northwestern suburbs of Chicago. The governing board includes the directors of all member libraries. To represent each of the library departments in the decision-making process, CCS has technical groups and advisory groups. Technical groups have quarterly meetings to discuss and make decisions on policies and procedures as well as provide an opportunity for continuing education. The membership of the technical group consists of staff from all member libraries. The technical group

for cataloging and metadata is called Cataloging and Metadata Management Technical Group (CMM). Advisory groups consist of seven appointed members that research and discuss policies and advise the technical groups on policy changes. The advisory group for cataloging is called the Standard Cataloging Rules and Practice Advisory Group (SCRAP).

The consortium's database has more than a million bibliographic records for physical items. This includes more than 6,000 bibliographic records for physical items on LGBTQIA+ topics. Illinois has a strong history of supporting the LGBTQIA+ population. Just over 4 percent of the population of the state of Illinois is LGBTQ. The Movement Advancement Project (MAP), a nonprofit organization, that rates state laws and policies for equality, rated Illinois's laws and policies on sexual orientation and gender identity as "High."⁵⁰ In 2019, Governor J. B. Pritzker signed a bill requiring schools to teach LGBTQ history. This law took effect on July 1, 2020.⁵¹ This makes CCS a great candidate for implementing the policy to allow the Homosaurus in the CCS catalog.

The Consortium's Research and Decision-Making Process

The consortium's decision-making process began with a research phase into the benefits of the Homosaurus and patron search habits. It was important to prove that the Homosaurus vocabulary was not redundant and that it would enhance the records by making them more accessible to patrons. This research process included comparing trending LGBTQIA+ terms in the Homosaurus to LCSH and search terms executed by patrons. After completing research, the consortium's established decision-making process was followed to pass a motion to approve the inclusion of Homosaurus terms in the catalog. To do so, the research findings were presented to the cataloging advisory group, known as SCRAP, for approval before presenting the findings to the cataloging technical group, known as CMM, for approval. Understanding the research findings and process that this consortium used to approve a new controlled vocabulary, can help others to gain approval for using the Homosaurus at other institutions.

The Benefits of the Homosaurus

The benefits of the Homosaurus can be demonstrated by comparing Homosaurus terms to LCSH, identifying differences in how concepts are represented in the two vocabularies, how the terms could be applied to items in the collection, and then comparing the terms to reports on how patrons search in the OPAC. Gender and sexuality terms have evolved significantly over the last twenty years. While the Homosaurus editorial board has made an effort to include the most current terms as

well as historical terms in the vocabulary, LCSH headings for LGBTQIA+ topics do not properly represent all of the current terms being used.⁵² Many general terms or concepts do overlap between the two controlled vocabularies.

Homosaurus terms can be beneficial when LCSH terms are out-of-date, differ, or when a term for a concept does not exist yet. This article can only include several of the examples of beneficial terms that were identified. One of the LGBTQIA+ topics that is not clearly visible in the library catalog is pansexuality. Without a LCSH, some LGBTQ headings can be left out of the record. Pansexual may be in the summary, but it is not in the summary of all items that include pansexual characters. In *The Ravenous Dark* by A. M. Strickland is a great example of a hidden item. At the time this was written, the OCLC record had no indicator that the book was anything but a romantic fantasy with a love triangle that includes a spirit. The Goodreads.com page includes an additional sentence describing the main character as pansexual.⁵⁵ The book includes pansexual, non-binary, asexual, and lesbian characters.⁵⁶ This is a great example of an item that would benefit from the addition of the Homosaurus subject headings and genre terms so that the item is properly labeled and accessible to those searching for LGBTQIA+ fantasy or romance with pansexual characters.

Although transgender subject headings exist, the current LCSH terms for non-binary people are not the currently preferred terms. These are "Gender-nonconformity" and "Gender-nonconforming people." "Non-binary" is the term that CCS patrons search with the most. Those who are non-binary would prefer to see it in the record because of the inherent bias of the term "gender-nonconformity." An example of a book that could benefit from the addition of the Homosaurus term "Non-binary people," as well as "Gender-queer people" and "Genderqueer comics," is *Gender Queer: A Memoir* by Maia Kobabe.⁵⁷ Additionally, the Homosaurus includes several other gender-related terms that are not LCSH yet and could improve the accessibility of items, like "Assigned female at birth" and "Assigned male at birth."

Numerous other Homosaurus terms that are not included in LCSH but are topics that are important to the LGBTQIA+ community could be beneficial to include in the catalog. Some examples include "Birth certificate amendments," "Corrective rape," "Genderqueer people," "Gender-fluid," "Latinx," and common slang. The Homosaurus also includes terms in other languages that could be important to Northern Illinois, like "Hijra," a commonly used term for intersex and transgender people in South Asia. Additionally, several genre headings that combine terms that would be normally two headings in LCSH, like "Bisexual horror fiction" and "Transgender horror fiction," could be useful for collocating items in the catalog.

Table 1. ILS Setting Changes Authority

	Governing Board	Technical Group	CCS Staff	Advisory Group
No change to workflow AND No financial or HR impact	Informed	Informed	Approve	Recommend
Change to workflow AND No financial or HR impact	Informed	Approve		Recommend
Financial or HR Impact OR Addition of service OR Policy change	Approve	Recommend		Recommend

Source: Cooperative Computer Services.

How Do Patrons Search?

To identify if the patrons would benefit from Homosaurus terms, a consortium staff member created a report of search terms that included several headings that were not LCSH yet, as well as the equivalent LCSH terms. Many searches were for known titles, so the terms included in this report did not represent the full search that was executed. Since 2018, sixty-five searches included the word “non-binary,” but only eleven included “gender non-conforming people.” While thirty-four searches contained the Homosaurus term “polyamory,” only five searches included the equivalent LCSH term of “non-monogamous” (not including the portion of the term “people”). In the same period more than 1,600 searches included the word “transgender,” and sixty-three searches were executed just for the word “trans.” Similarly, 163 searches included the term “queer,” but only twenty searches included the LCSH term “sexual minorities.” Because many users search for known titles, searches executed by this consortium’s patrons include more commonly used terms than LCSH terms. Including the subject headings that more closely align with the terms that users search with, and those that are commonly part of known titles, are important for improving the accessibility of LGBTQIA+ topics in the catalog.

Passing the Motion

Understanding the process that the consortium uses to approve a new thesaurus may help other librarians gain approval of the Homosaurus at their libraries. CCS members all use the same cataloging manual and local practices. So any workflow changes, like allowing the Homosaurus, need to follow the consortium’s decision-making procedures, as depicted in table 1, to be adopted. The governance structure consists of four tiers. When it comes to cataloging workflow, an advisory group consisting of seven members can pass motions to recommend changes. Consortium staff can advise the library staff on these changes at any point in the approval process. Then a technical group that consists of members from every library needs to vote on the recommendation to approve the policy. If the policy includes a change to the bibliographic input standards, or completely replaces

a subject heading, the officers from the governing board that make up the executive committee need to approve of the change. An example of this would be replacing the “Illegal aliens” subject headings. Any changes in cataloging policy can take two or more months to be approved from the time that an issue is brought to an advisory or technical group.

To get approval to allow Homosaurus terms in the catalog, a CCS staff member presented the findings of their research at the April 2021 cataloging advisory group meeting, which is called SCRAP. SCRAP members stated their concern about homonyms that represent more commonly used meanings as an LCSH term, as well as sexually explicit terms. Some examples of these terms included “Bears,” “Faeries,” and “Slaves.” At the time of the discussion, these terms did not have parenthetical qualifiers in Homosaurus. For example, the Homosaurus term “Bears” would be conflated with the animal. Whereas the LCSH term “Bears (Gay culture)” has a parenthetical qualifier to distinguish between the term for gay men and animals. Since then, the Homosaurus editorial board updated many homonyms by adding parenthetical qualifiers with the June 2022 update.⁵⁸ This update changed “Bears” to “Bears (Gay culture).” At the time, the group was willing to approve a motion to recommend that SCRAP reviews the Homosaurus and selects the most appropriate terms to allow.

However, CCS staff discussed the SCRAP recommendation and had a different opinion. The staff’s preference was for the Cataloging and Metadata Management (CAMM) Technical Group to vote on a motion to allow all terms from the Homosaurus in the catalog. The workload required to review, select, and maintain the list would not be the best use of an advisory group’s time for the long run. After reviewing the vocabulary, the staff believed that any objectionable terms would be more relevant to archives and special libraries than public libraries. CCS staff were able to generate a report comparing the search terms used by patrons to Homosaurus terms. This allowed them to create a solid list of terms with double meanings. The cataloging manual page could then include sufficient guidance on how to best use catalogers’ judgement when selecting Homosaurus terms to apply to a record.

The policy then needed to be brought to the CAMM Technical Group for approval. At the May 2021 CAMM

Technical Group meeting, a CCS staff member presented an updated presentation on the topic which included the advisory group's opinion and CCS staff's opinion. This included an explanation of how reports allowed staff to identify terms to avoid and that the cataloging manual would provide enough guidance on these terms without requiring the advisory group to regularly review the Homosaurus. One concern about the Homosaurus that a CAMM member mentioned at a meeting was the lack of labels for genres. The Homosaurus does not label genre headings as genres in compliance with the Lavender Library, Archives, and Cultural Exchange (LLACE) classification. Genres are considered the same as subject headings. Nor should genres be used as subdivisions of subject headings like genres can be placed in the subfield v to subdivide LCSH. However, CCS member libraries decided that the local policy should place the Homosaurus genre headings in 655 fields as they do with Library of Congress Genre/Form Terms (LCGFT). Given that many of the Homosaurus terms could be new to the catalogers, and some could feel cautious about applying unfamiliar terms, CCS staff also planned to provide a training session with a member of the Homosaurus editorial board.

After the presentation and discussion, the motion to allow the Homosaurus passed unanimously. The next step was to finalize training plans with the member of the Homosaurus editorial board and create a draft of the cataloging manual page. The cataloging manual page needed to be discussed and expanded on at the SCRAP Advisory Group meeting before it could be brought back to the CAMM Technical Group for approval.

The Cataloging Manual Section on the Homosaurus

After passing the motion, the cataloging manual page needed to be drafted. A CCS staff member created the initial draft of the page based on the recommendations of the SCRAP Advisory Group and the discussion from the CAMM Technical Group meeting, as well as instructions for requesting the creation of authority records. The SCRAP Advisory Group reviewed the page and discussed additional points that could be added to the page. This included when it would be unnecessary to apply a Homosaurus term, such as one that represented the exact concept of the LCSH term, using the same words in the same order or a different order.

Homosaurus utilizes both "LGBTQ+" and "queer" as adjectives that modify nouns, e.g., "African American LGBTQ+ people" and "African American queer people." According to the hierarchy, queer is a narrower term of LGBTQ+ and should only be used when a person self-identifies as queer.⁵⁹ After receiving training on the Homosaurus, and thoroughly researching the usage of the term "queer" as

an umbrella term, SCRAP decided to recommend a local practice to apply queer and LGBTQ+ terms simultaneously due to the increasing amount of LGBTQ+ individuals that self-identify as queer, use it as an umbrella term, search for it in the catalog, and use it as a search term for identifying useful online resources.

The final draft of the Homosaurus guidelines was then brought to the CAMM Technical Group for approval. The motion to approve of the guidelines passed on November 17, 2021.⁶⁰ The consortium's guidelines for applying Homosaurus terms consist of the following:

- Genre headings are placed in a 655 field.
- Homosaurus headings are not added when the terms are the same as LCSH or use the same words in a different order as LCSH.
- Terms that include "queer" or "LGBTQ+" should be added to records simultaneously when both versions exist, e.g., "Asian LGBTQ+ people" and "Asian queer people."
- Avoid using terms lacking a parenthetical qualifier that have a more commonly used meaning, like "Dark rooms" and "Faeries." A broader term can be used instead. The list is included in the manual.
- When adding a new heading, request the creation of an authority record from the helpdesk.

Since using the Homosaurus is not a requirement, the catalogers are welcome to use cataloger's judgement when choosing to add Homosaurus terms to the records. An example of a record that follows these guidelines is for the book *Never Silent: ACT UP and My Life in Activism* by Peter Staley (figure 1). This is an autobiography of an AIDS activist. The record includes the LCSH terms for the author's name, "ACT UP (Organization)," "AIDS activists-United States," and "AIDS (Disease)-United States." The cataloger then added the Homosaurus subject heading "LGBTQ+ activists." There is no equivalent Homosaurus term for queer activists. Other Homosaurus subject headings, like "AIDS Activists," use the same terms as LCSH headings, so additional Homosaurus subject headings were not added. However, three Homosaurus genre headings were included. The record includes the LCGFT heading of "Autobiographies." The Homosaurus genre headings for this record include "LGBTQ+ biographies," "Gay biographies," and "Queer biographies." This case demonstrates the usage of the queer and LGBTQ+ headings to support the patrons who search with these terms.

One Year Later

It has been more than one year since CCS member libraries began to include Homosaurus terms in the catalog. As of November 2022, 296 authority records had been created

050	4	1A643.831b.5825 2022
082	04	1362.19697920092:23
100	1	1Staley, Peter,1author.
245	10	1Never Silent :1bACT UP and my life in activism /1cPeter Staley.
264	1	1Chicago, Illinois :1bChicago Review Press,1c[2022]
264	4	1c@2022
300		1axiii, 269 pages :1billustrations ;1c23 cm
336		1atext:1rdacontent
337		1aunmediated:1rdamedia
338		1avolume:1rdacarrier
520		1q"Never Silent tells previously untold stories of the life of the leading subject of David France's How To Survive A Plague, Peter Staley, including his continuous activism to find treatments and public health interventions.The previously untold stories of the life of the leading subject in David France's How To Survive A Plague, Peter Staley, including his continuing activism in 1987, somebody shoved a flyer into the hand of Peter Staley: massive AIDS demonstration, it announced. After four years on Wall Street as a closeted gay man, Staley was familiar with the homophobia common on trading floors. He also knew that he was not beyond the reach of HIV, having recently been diagnosed with AIDS-Related Complex. A week after the protest, Staley found his way to a packed meeting of the AIDS Coalition To Unleash Power--ACT UP--in the West Village. It would prove to be the best decision he ever made. ACT UP would change the course of AIDS, pressuring the National Institutes of Health, the FDA, and three administrations to finally respond with research that ultimately saved millions of lives. Staley, a shrewd strategist with nerves of steel, organized some of the group's most spectacular actions, from shutting down trading on the floor of the New York Stock Exchange to putting a giant condom over the house of Senator Jesse Helms. Never Silent is the inside story of what brought Staley to ACT UP and the explosive and sometimes painful years to follow--years filled with triumph, humiliation, joy, loss, and persistence.Never Silent is guaranteed to inspire the activist within all of us. " --1cProvided by publisher.
600	10	1Staley, Peter.
610	20	1ACT UP (Organization)
650	0	1AIDS activists:1United States%1Biography.
650	0	1AIDS (Disease):1United States%1History.
650	7	1LGBTQ+ activists:1homoit
655	7	1Autobiographies:1lqft
655	7	1LGBTQ+ autobiographies:1homoit
655	7	1Gay autobiographies:1homoit
655	7	1Queer autobiographies:1homoit
700	1	1Cooper, Anderson,1ewriter of added commentary.

Figure 1. Image of the bibliographic record for *Never Silent: ACT UP and My Life in Activism* by Peter Staley. The subject headings with the source code homoit in the subfield 2 are the Homosaurus headings.

for Homosaurus headings. Catalogers added Homosaurus headings to 2,439 bibliographic records. This consists of about a third of the bibliographic records for physical items on LGBTQIA+ topics in the CCS catalog. Some of the cataloging librarians have helped to increase the number of Homosaurus headings in the records by adding them as a bulk change. Catalogers employed by the member libraries and CCS staff monitor Homosaurus for new releases and inform the CCS Data Services Librarian of changes. Since CCS began using Homosaurus, the editorial board released updates that revised existing headings.⁶¹ The Data Services Librarian was tasked with updating authority records and bulk updating headings that required updating.

Only one major challenge has been discovered in the year since catalogers began to add Homosaurus terms to the bibliographic records. A cataloger discovered that a full level record with Homosaurus terms had been overlaid by one without Homosaurus terms, thus undoing their work. This is an inevitable problem for a consortium. CCS staff included several reminders at the CAMM Technical Meeting with the hope that this will improve the situation. These reminders included the following:

- How to identify the Homosaurus headings in the records.
- That it is acceptable to add Homosaurus terms to records in OCLC Connexion so they are retained in the OCLC record.
- To change the record level to full level so that final records from vendor provided cataloging services would not overlay the record automatically.

Since this reminder, additional problems have not been reported. Catalogers regularly request the creation of new

authority records from the CCS Data Services Librarian and have been consistently adding the terms to new bibliographic records.

Recommendations for Getting Buy-In

When adopting innovative practices, it is important to get buy-in from the administrators and librarians from a library or all members of a consortium. To do so, librarians need to demonstrate its value in presentations to the administrators or governance groups. When planning to present on the topic it is important to demonstrate how beneficial the Homosaurus is with a dynamic presentation. Topics to include in the presentation can consist of a comparison of subject headings between LCSH and Homosaurus, examples of records in catalogs that include Homosaurus terms, user statistics, and potential cataloging guidelines.

Presentations can include examples of problematic subject headings and specific titles that would benefit from the addition of Homosaurus terms in the records. Examples can also include authority records for Homosaurus terms. The CCS catalog (<https://ccs.polarislibrary.com/polaris/>) can be searched for examples of bibliographic records that include the Homosaurus terms by utilizing the list of terms that is linked to on the Cataloging Manual page.⁶² Using examples from a library that has already approved the Homosaurus and is actively cataloging with it provides proof of its efficacy and demonstrates a valid use case.

Generating reports of the actual searches that are executed in your catalog for Homosaurus terms and LCSH can provide you with evidence of the terms that your patrons utilize when searching for items in your catalog. By comparing

terms that are used to search with to the Homosaurus and LCSH, you can demonstrate which vocabulary is kept up-to-date with the most widely used search terms. These statistics can also be compared to internet search trends using Google Trends (<https://trends.google.com/>). The searches executed on Google should be the most representative of those currently used by researchers of LGBTQIA+ topics. When subject headings match search terms, items will become more accessible to the patrons.

It is also helpful to include an explanation of what should be included in the cataloging manual for your library or consortium. The CCS Cataloging Manual page can again serve as an example. However, these guidelines do include a significant number of local practices. Crafting your own guidelines that meet the needs of your library's local practices is important for gaining approval. Since some people are not familiar with LGBTQIA+ terms, it is also beneficial to create a plan for training. This training plan can include the cataloging guidelines but should also include professional development like a webinar.

Presentations that touch on all these bases should be thorough enough to educate the decision makers at your library or consortium on the Homosaurus in a manner that will make the issue understandable enough to hopefully gain the support needed to allow Homosaurus terms as CCS did. For this consortium, this process included two similar presentations that evolved as decisions were made as well as additional discussions on the cataloging guidelines. Planning for a similar timeline of presentations and discussions can help the decision process proceed smoothly.

Conclusion

It is important for public libraries to implement policies that are inclusive and supportive of all members of the communities that they serve. This includes supporting those that are actively searching for LGBTQIA+ topics. The work that catalogers contribute help to ensure that patrons can access the resources they need by adopting a subject heading policy that is inclusive of the language most familiar to the community. A practical way to enhance subject headings in records is by allowing the use of an alternative controlled vocabulary, like The Homosaurus: An International LGBTQ+ Linked Data Vocabulary, as a supplement to LCSH. Allowing an additional controlled vocabulary in the catalog that is regularly updated by experts from the LGBTQIA+ community will enhance access in a way that is preferable to adding a public tagging function to a catalog. Homosaurus is controlled by catalogers in the same way that LCSH is and accordingly does not require the same review for problematic tags that crowdsourced tagging might. Unlike the technologically advanced backend enhancements of open-source ILS systems, the inclusion of Homosaurus in bibliographic records is practical, affordable, and easily accessible to the technological capabilities of public libraries. Ensuring that administrators and staff are willing to approve a policy to allow an additional controlled vocabulary is important when adopting innovative practices. If other libraries follow the recommendations to present administrators and staff with the research that proves the value of improving discovery and access, plans for creating a cataloging manual section, and plans for training and maintenance of the vocabulary, achieving the approval of the new policy will be within reach.

References

1. Jeffrey M. Jones, "LGBT Identification in U.S. Ticks Up to 7.1%," Gallup, February 17, 2022, <https://news.gallup.com/poll/389792/lgbt-identification-ticks-up.aspx>.
2. Ellen Greenblatt, "The Treatment of LGBTIQ Concepts in the Library of Congress Subject Headings," in *Serving LGBTIQ Library and Archives Users: Essays on Outreach, Service, Collections, and Access*, ed. Ellen Greenblatt (Jefferson, NC: McFarland, 2011), 220–22; Jessica L. Colbert, "Coming out of the Controlled Closet: A Comparison of Patron Keywords for Queer Topics to Library of Congress Subject Headings," *Library Philosophy and Practice (e-journal)*, 1685 (2017), <https://digitalcommons.unl.edu/libphilprac/1685>.
3. Walt Walker, "Building the Homosaurus: An International LGBTQ Linked Data Vocabulary," LMU Library News, September 29, 2019, <https://librarynews.lmu.edu/2019/09/building-the-homosaurus-an-international-lgbtq-linked-data-vocabulary/>.
4. Paul Edlund, "A Monster and a Miracle: The Cataloging Distribution of the Library of Congress, 1901–1976," *Quarterly Journal of the Library of Congress* 33, no. 4 (1976): 383–421; Marth M. Yee, "'Wholly Visionary': the American Library Association, the Library of Congress, and the Card Distribution Program," *Library Resources & Technical Services* 53, no. 2 (2009): 68–78, <https://doi.org/10.5860/1rts.53n2.68>.
5. Beecher Wiggins, "The Program for Cooperative Cataloging," Proceedings of the Taxonomic Authority Files Workshop, Washington, DC, June 22–23, 1998, <https://researcharchive.calacademy.org/research/informatics/taf/proceedings/wiggins.html>.
6. Staci Ross and Michelle Conquist, "The African American Subject Funnel Project," in *Decolonizing the Catalog: Anti-Racist Description Practices from Authority Records to Discovery Layers*, Reference and User Services Association of

- the American Library Association, virtual presentation, July 7, 2021, <http://d-scholarship.pitt.edu/41828/1/2021%20RUSA%2-%20African%20American%20Subject%20Funnel.pdf>.
7. "Gender and Sexuality Funnel Project," Library of Congress, last modified October 20, 2022, <https://www.loc.gov/aba/pcc/saco/gender-sexuality-funnel.html>.
 8. "Subject Heading and Term Source Codes," Source Codes for Vocabularies, Rules, and Schemes: Library of Congress, Network Development & MARC Standards Office, last modified October 3, 2022, <https://www.loc.gov/standards/sourcelist/subject.html>.
 9. Matt Johnson, "A Hidden History of Queer Subject Access" in *Radical Cataloging: Essays at the Front*, ed. K. R. Roberto (Jefferson, NC: McFarland, 2008).
 10. Johnson, "A Hidden History of Queer Subject Access." Sanford Berman, *Prejudices and Antipathies: A Tract on the LC Subject Heads Concerning People* (Metuchen, NJ: Scarecrow, 1971).
 11. Ben Christensen, "Minoritization vs. Universalization: Lesbianism and Male Homosexuality in LCSH and LCC," *Knowledge Organization* 35, no. 4 (2008): 230, <https://doi.org/10.5771/0943-7444-2008-4>.
 12. Sara A. Howard and Steven A. Knowlton, "Browsing through Bias: The Library of Congress Classification and Subject Headings for African American Studies and LGBTQIA Studies," *Library Trends* 67, no. 1 (2018): 77, <https://doi.org/10.1353/lib.2018.0026>.
 13. Greenblatt, "The Treatment of LGBTIQ Concepts," 220–22.
 14. Greenblatt, "The Treatment of LGBTIQ Concepts," 221.
 15. Greenblatt, "The Treatment of LGBTIQ Concepts," 221.
 16. Ben Montz and Matthew Solomon, "Acronyms Explained," OutRight Action International, September 20, 2021, <https://outrightinternational.org/content/acronyms-explained>.
 17. Melissa Adler, *Cruising the Library: Perversities in the Organization of Knowledge* (New York: Fordham University Press, 2017), 8.
 18. NLGJA: The Association of LGBTQ Journalists, "Queer," Stylebook, last updated December 2021, <https://www.nlgja.org/stylebook/queer/>.
 19. "Google Trends: Compare," (for queer, gays, and sexual minorities for the last 5 years in the United States), Google, last modified June 13, 2021, <https://trends.google.com/trends/explore?date=today%205-y&geo=US&q=queer,Gays,Sexual%20minority>.
 20. Juliette Roceleau, "A Former Slur is Reclaimed, And Listeners Have Mixed Feelings," NPR, August 21, 2019, <https://www.npr.org/sections/publiceditor/2019/08/21/752330316/a-former-slur-is-reclaimed-and-listeners-have-mixed-feelings>.
 21. K. R. Roberto, "Inflexible Bodies: Metadata for Transgender Identities," *Journal of Information Ethics* 20, no. 2 (2011): 58.
 22. Colbert, "Coming out of the Controlled Closet."
 23. Adler, *Cruising the Library*; Howard and Knowlton, "Browsing through Bias," 77; Juliet L. Hardesty and Allison Nolan, "Mitigating Bias in Metadata: A Use Case Using Homosaurus Linked Data," *Information Technology & Libraries* 40, no. 3 (2021): 1, <https://doi.org/10.6017/ital.v40i3.13053>.
 24. "Google Trends: Compare," (for gender non-conforming and non-binary people for the past 12 months), Google, last modified June 17, 2022, <https://trends.google.com/trends/explore?geo=US&q=gender%20non-conforming,non-binary%20people>.
 25. Colbert, "Coming out of the Controlled Closet."
 26. Colbert, "Coming out of the Controlled Closet."
 27. Charles A. Cutter, *Rules for a Dictionary Catalogue* (Washington, DC: Government Printing Office, 1891), last modified April 8, 2019, <https://www.gutenberg.org/files/59215/59215-h/59215-h.htm>.
 28. Brian Dobreski, Karen Snow, and Heather Moulaison-Sandy, "On Overlap and Otherness: A Comparison of Three Vocabularies' Approaches to LGBTQ+ Identity," *Cataloging & Classification Quarterly* (2022): 14, <https://doi.org/10.1080/01639374.2022.2090040>.
 29. Howard and Knowlton, "Browsing through Bias."
 30. Emily Drabinski, "Queering the Catalog: Queer Theory and the Politics of Correction," *Library Quarterly: Information, Community, Policy* 83, no. 2 (2013), 96–97, 101.
 31. Drabinski, "Queering the Catalog," 107.
 32. Melissa Adler, "Transcending Library Catalogs: A Comparative Study of Controlled Terms in Library of Congress Subject Headings and User-Generated Tags in LibraryThing for Transgender Books," *Journal of Web Librarianship* 3, no. 4 (2009), <https://doi.org/10.1080/19322900903341099>.
 33. Frances Nichols and Edwin M. Cortez, "Breaking Down the Barriers: Creating Empathetic Ontologies for LAMBDA Initiative," *Tennessee Libraries* 63, no. 1 (2013), <https://www.tnla.org/page/529>.
 34. Nichols and Cortez, "Breaking Down the Barriers."
 35. Hardesty and Nolan, "Mitigating Bias in Metadata."
 36. Hardesty and Nolan, "Mitigating Bias in Metadata."
 37. Dobreski, Snow, and Moulaison-Sandy, "On Overlap and Otherness," 19.
 38. "Subject Heading and Term Source Codes," Library of Congress, Network Development & MARC Standards Office, last modified June 15, 2022, <https://www.loc.gov/standards/sourcelist/subject.html>.
 39. Donna J. Drucker, "How Subjects Matter: the Kinsey Institute's *Sexual Nomenclature: A Thesaurus* (1976)," *Information & Culture* 52, no. 2 (2017).
 40. Johnson, "A Hidden History of Queer Subject Access," 24.
 41. Diana K. Wakimoto, Debra L. Hansen, and Christine Bruce, "The Case of LLACE: Challenges, Triumphs, and Lessons of a Community Archives," *American Archivist* 76, no. 2 (2013), <https://www.jstor.org/stable/43490362>.
 42. Matt Johnson, "GLBT Controlled Vocabularies and Classification Schemes," *Rainbow: A Round Table of the American*

- Library Association, American Library Association, last modified August 2007, <https://www.ala.org/rt/rrt/popularresources/vocab>.
43. Johnson, "GLBT Controlled Vocabularies and Classification Schemes."
 44. Marika Cifor and K. J. Rawson, "Mediating Queer and Trans Pasts: The Homosaurus as Queer Information Activism," *Information, Communication & Society* (2022): 6, <https://doi.org/10.1080/1369118X.2022.2072753>.
 45. Walker, "Building the Homosaurus."
 46. Adrian Williams, "Use of Homosaurus at University of Kentucky Libraries," in "Project briefing on 'Reimagine Descriptive Workflows'; Use of the Homosaurus at U Kentucky Libraries," 2021 LD4 Conference on Linked Data, July 21, 2021, https://youtu.be/eyrAd_hdvyE?t=1969.
 47. Adrian Williams, "Using the Homosaurus Controlled Vocabulary in Both OCLC Connexion and in the Local Catalog," presented at the OCLC Cataloging Community Meeting, online, January 28, 2022, <https://www.oclc.org/en/events/2022/cataloging-community-meeting-Jan2022.html>.
 48. "Controlled Vocabularies," Harvard Wiki, Harvard University Schlesinger Library Collection Services, last modified June 29, 2022, <https://wiki.harvard.edu/confluence/display/Proceed/Controlled+Vocabularies>; "Homosaurus Subject Headings," CCS Cataloging Manual, CCS, last modified January 21, 2022, https://www.ccslib.org/Catalogers/index.php?title=Homosaurus_Subject_Headings; "Homosaurus," Genre Subject Headings, Schaumburg Township District Library, last modified June 8, 2021, <https://sites.google.com/view/genre-subject-headings/home/homosaurus?authuser=0>.
 49. "Gender, Sex, and Sexual Orientation," BioPortal, National Center for Biomedical Ontology, last modified December 22, 2021, <https://biportal.bioontology.org/ontologies/GSSO>.
 50. "Illinois' Equality Profile," MAP Movement Advancement Project, Movement Advancement Project, last modified date 2022, https://www.lgbtmap.org/equality-maps/profile_state/IL.
 51. Lee V. Gaines, "Pritzker Signs Bill Requiring Illinois Schools Teach LGBT History," Illinois Public Media, August 13, 2019, <https://will.illinois.edu/news/story/pritzker-signs-bill-requiring-illinois-schools-teach-lgbt-history>.
 52. Dobreski, Snow, and Moulaison-Sandy, "On Overlap and Otherness."
 53. "Aromanticism," Library of Congress: LC Subject Headings (LCSH), last modified April 7, 2022, <https://id.loc.gov/authorities/subjects/sh2022003405.html>.
 54. Claudie Arseneault et al., *Common Bonds: A Speculative Aromantic Anthology* (self-published, 2021).
 55. "In the Ravenous Dark by A. M. Strickland," Goodreads.com, last modified 2021, https://www.goodreads.com/book/show/54017941-in-the-ravenous-dark?ac=1&from_search=true&qid=UxxBJXjUva&rank=1.
 56. A. M. Strickland, *In the Ravenous Dark* (New York: Imprint, 2021).
 57. Maia Kobabe, *Gender Queer: A Memoir* (Portland: Oni Press, 2020).
 58. "Homosaurus v. 3.2 Updates," Homosaurus: An International Linked Data LGBTQ+ Vocabulary, released June 2022, https://homosaurus.org/releases/archive/release_notes_3_2.
 59. "African American queer people," Homosaurus: An International Linked Data LGBTQ+ Vocabulary, last modified December 14, 2021, <https://homosaurus.org/v3/homomit0001151>.
 60. "Homosaurus Subject Headings," CCS Cataloging Manual, CCS, last modified January 21, 2022, https://www.ccslib.org/Catalogers/index.php?title=Homosaurus_Subject_Headings.
 61. "Homosaurus Releases," Homosaurus: An International Linked Data LGBTQ+ Vocabulary, released June 2022, <https://homosaurus.org/releases>.
 62. "Homosaurus Subject Headings."

Documenting Classification Systems

A Case Study and Considerations

Christopher Straughn

There is little literature on documenting the correct application of classification systems. This paper seeks to remedy this gap by describing how Northeastern Illinois University created documentation for their implementation of system that describes Illinois State publications. We recommend creating documentation that is flexible, accessible, and user-oriented. Flexible documentation not only facilitates changes to the documentation, it also allows librarians to take advantage of other uses of this documentation. In our case, the process of documentation produced a near complete listing of Illinois publications and provided the basis for a structural history of Illinois government. Documentation of classification systems not only improves library work, but also assists in preserving artifacts of library history.

The goal of library classification is to “bring together those books which will be most used together,”¹ and by doing so improve retrieval and enhance browsing, among other things.² In a physical collection, the call numbers assigned by classification systems ensure that each item has a home in the bookstacks, and they serve as a visible reminder that the materials shelved next to each other are related in some way. An enterprise like classifying library materials is necessarily complex, especially as the largest libraries have many millions of items, each of which requires a distinct call number designation. As a complex endeavor, it is necessary to have detailed documentation of classification systems. Although this documentation is clearly crucial, there is very little guidance on how to create or structure this documentation. While this is likely because most libraries rely on outside agencies—such as Library of Congress (LC)—to maintain classification systems, it is not unusual for libraries to use local or modified systems for portions of their collections.³ This article describes the approach taken at Northeastern Illinois University to document the local system used to classify its Illinois State publications.

Northeastern Illinois University employs the Nakata-Strange Classification System to classify its collection of Illinois State documents. This system was developed by Yuri Nakata and Michele Strange in 1974 and was intended to organize the publications of the State of Illinois at the University of Illinois Chicago.⁴ There are nineteen libraries that serve as Illinois Depository Libraries, that is, they receive copies of state publications to ensure public access.⁵ As is the case for the Federal Depository Library Program, the Illinois depository program makes a number of stipulations regarding public access and retention of materials.⁶ The Illinois State Library, which administers this deposit program, does not require that libraries employ any specific classification system for materials received as part of this program. As a result, sixteen of the depository libraries have opted to use either the LC or Dewey Decimal systems to classify their Illinois documents. The Chicago Public Library employs a local system inspired by the Superintendent of Documents (SuDocs) system, while the remaining two libraries, Northeastern Illinois University (NEIU) and the

Christopher Straughn (castraughn@neiu.edu) is an assistant professor and the Continuing Resources and Government Information Librarian at Northeastern Illinois University.

University of Illinois Chicago (UIC) use the Nakata-Strange System, which is likewise inspired by SuDocs.

Like SuDocs, the Nakata-Strange System is based on the current organizational status of the government author, and therefore changes as the organizational structure of the state government changes.⁷ This means that Nakata and Strange's original documentation is unable to classify today's publications, as many departments (such as the Departments of Natural Resources, Homeland Security, and Human Services) did not yet exist in 1974. As a result, new class stems (*DNR*, *HLS*, and *DHS* for the respective aforementioned examples) have been created. Likewise, subagencies and serials are identified by integers, so the creation of new subagencies and serials (which is very common) requires the assignment of new numbers to these corporate bodies and works.

What makes the Nakata-Strange Classification System different from SuDocs or from the many other state publication classification schemes is the lack of oversight from a central agency. New SuDocs numbers are assigned by the US Government Publishing Office, and most state publication classifications are governed by their respective state libraries. The Nakata-Strange System has no such oversight, and the two libraries (NEIU and UIC) that use this system have not collaborated, resulting in what are effectively distinct systems at each library. For example, UIC uses *NR* to designate the Illinois Department of Natural Resources where NEIU uses *DNR*. And where NEIU designates the Department of Homeland Security with the class step *HLS*, UIC instead employs *TT* to designate the Terrorism Taskforce, which was a sub-agency of the Department of Homeland Security. Not only do the two libraries disagree about the form of certain class stems, they also disagree about which agencies merit class stems.

Until recently, Northeastern Illinois University Libraries had little documentation of its system for classifying Illinois documents. In fact, simply learning that our system was based on that of Nakata and Strange required many hours of browsing through binders of old documentation. The only visible documentation was two drawers of typed 3x5 inch notecards that were kept in the Government Documents Office. These cards outlined the basics of the system from the most general level (the department/class stem) to a more granular level (the book number or serial number). This method of record keeping was inaccurate and difficult to access, as the drawers of cards were not easily moved or taken home for remote work. Therefore we decided to create an electronic version of these records to improve access and accuracy.

While our initial goal was simply to improve access, we saw this as an opportunity to create a full system of documentation that included not only data from the cards, but also text explaining the structure of call numbers so library staff could more easily assign new call numbers. We also recognized the value of our system as a unique piece of library history and hoped to preserve this system in a way that

acknowledged that history. In creating our documentation, we also wanted to be transparent about how it was created to assist any other institutions that are tasked with creating similar documentation.

As we planned for and ultimately created our documentation, we found that many of the same principles that govern general documentation applied to the documentation of classification systems. Namely, documentation should be accessible, flexible, and user-oriented. By opting for a web-based platform with built-in flexibility, we were able to not only create a useful guide for library staff, but to also create a comprehensive list of our Illinois documents holdings, lay the foundation for a history of Illinois government, and preserve the unique aspects of our local implementation of a unique classification system.

Literature Review

While there is literature that describes the practical application of classification systems, there is little literature that describes how these systems should be documented. Even well-documented classification systems tend not to elaborate on how documentation was created or why it is organized in the way that it is. The Library of Congress Classification and Shelving Manual, for example, provides considerable information about the history of LC schedules, but does not describe how the structure of this documentation was organized and why given elements of the documentation were chosen for inclusion.⁸

In planning for our documentation, we consulted documentation for other classification systems to determine how ours should be structured. In addition to LC classification, we took guidance from the SuDocs system,⁹ which served as the inspiration for the Nakata-Strange Classification System. We also consulted other state documents classification systems, many of which have been collected by the GODORT-affiliated State Documents Collaborative Group.¹⁰

As the Nakata-Strange Classification System was based on SuDocs, it was also useful to consult the documentation for other classification systems that are derived from other, better-documented systems. The National Library of Medicine Classification,¹¹ and Canadian Class PS8000,¹² which are LC-based, and the Mormon Classification System,¹³ which is Dewey Decimal-based, provided insights into how to structure documentation when a similar system is more thoroughly documented. In these cases, it is assumed that the user has knowledge of the base systems and focuses on the novel aspects of the derivative systems.

Documentation in technical services is somewhat better represented in the literature, and some of the key points raised in this literature informed how we planned our own process of documentation. Nevertheless, much of the literature on

library documentation actually laments the lack of literature on the topic, as well as the overall lack of documentation that occurs in libraries.

In 1999, Brisson characterized the lack of documentation in libraries as resulting from the perceived ineffectiveness of documentation in improving library productivity, and noted that libraries often rely on institutional memory, rather than effective documentation to “maintain consistency in local practice and procedures.”¹⁴ In 2005, White similarly reflected on the lack of library documentation (and lack of literature on documentation), pointing out the irony that “while librarians excel at archiving and collecting the records and materials used and produced by other people, many libraries are not very good at creating and maintaining their own documentation.”¹⁵ This lack may be due to it being a “a huge task that is often not a high priority in day-to-day work, especially when staff already feel overloaded, and it may be difficult to justify the need for documentation work to administrators who are focused on production.”¹⁶ Despite the lack of current, broad-scoped literature on documentation, the lessons of earlier works and works focused on narrower topics can be applied to the problem at hand.

Much of the literature on documenting technical services procedures focuses on shifting from paper to online documentation. This has the benefit of making documentation more widely accessible, both to library staff (who may be working remotely or across different sites) and to outside institutions. Craft suggests that making documentation accessible outside of the institution for which it was created allows other institutions to compare their practices to those of others and to provide models for their own documentation.¹⁷ While online materials are naturally easier to share, institutions have not always taken advantage of this inherent benefit. Urban reports that the majority of survey participants “have their internal guides set to ‘Private’ or ‘Unpublished,’” meaning that their documentation is not visible to those outside of their institutions.¹⁸

Online documentation may also exploit the benefits of existing in a nonlinear, hyperlinked environment. Tomasi and Mehlenbacher note that online documentation often fails users when it merely replicates print documentation in a new environment. They propose reengineering documentation to take advantage of the online medium and to focus on the user.¹⁹ One way of reengineering documentation is to automate parts of the process, something which is not possible in print, and which saves time and effort on behalf of the person creating the documentation.²⁰

Methods

The process of creating our documentation started with a clear goal in mind: to transform the old documentation,

which was in a drawer on three-by-five-inch notecards, into something more accessible. The literature on library documentation informed how we approached this process, especially literature on moving documentation to an online platform.

Before we could begin our documentation process, we had to consider whether creating it would be worthwhile. Does the volume of new Illinois publications justify the effort required to create this? What other value does this documentation provide?

The prior state of the collection—stored on cards—was an unacceptable way to document a growing collection. Although not as many as in previous decades, NEIU still receives a few print publications per month from the State of Illinois. Many of these are new publications that need new call numbers. Using cards was cumbersome and, in a time when remote work has become both possible and necessary, impractical. Additionally, parts of the collection are still uncataloged, and the only evidence of the existence of certain titles was in our card-based documentation. Updating our documentation meant greater ease of creating new call numbers and would provide a better overview of the materials we hold.

An additional motive for creating better documentation is the fact that our system is, in effect, unique. As previously noted, UIC and NEIU have not collaborated to ensure that our implementations of the Nakata-Strange Classification System are uniform. As a result, the original system has evolved into two unique systems. Documentation in this context is more than just practical: it is a means of preserving a unique artifact of library history.

As a government publications classification system, the Nakata-Strange Classification System also provides insights into the history of Illinois government. There is, as far as we know, no systematic description of the structural history of Illinois government, at least not with the level of detail that the Nakata-Strange Classification System can provide. The *Illinois Blue Book*, for example, lists major agencies and boards, as well as the names of the persons who work with those organizations. However, small agencies and boards are often omitted, and there is rarely any detail about the internal structure of agencies. Viewing the Nakata-Strange Classification System as not only a historical document, but also as a means to conduct research independent of the materials it describes informed how we approached our documentation.

Having determined that creating new documentation would benefit library staff and would provide additional benefits, we needed to consider the needs of our end users. We intended for our primary users to be librarians and staff working in the Government Documents Department. These staff members would need to be able to assign new call numbers to newly received materials and would need to know, for example, if we already held materials published by a given

department or if the material in hand belonged to a series with an established series number. We also wanted other library staff to be able to look up the entities represented by the system to assist patrons in locating materials. While patrons were not the main audience for this documentation, we did consider that researchers of Illinois history and government may find our documentation useful. We also considered that the casual user of our documentation would have very different needs from library staff and serious researchers. Having a granular system that allowed some users to see just an overview of the system (such as class stems) and allowed other users to dig deeper meant that we could provide usable information to a variety of users.

A final consideration was time and staffing. The Government Documents Department consists of a single librarian who also has duties outside of that department. Student workers and the Technical Services Department provide occasional assistance. Although upfront time was required to create the documentation, the value of having easily consulted documentation clearly outweighed these costs. To save time and effort we examined what documentation (and data) was available both within our library and in external sources, then incorporated that into this new documentation.

From the beginning of this process, we wanted our documentation to be web-based, as that would allow for the greatest ease of access. We wanted to take advantage of the web's ability to organize data in ways that print documentation cannot: arranged in hierarchies, sorted, or linked.²¹ We considered several options for publishing our documentation on the web, taking into consideration cost, ease of data entry, and accessibility. One option was to use the library's LibGuides platform. As we already subscribed to LibGuides, cost was not an issue. Additionally, LibGuides are relatively easy to edit. However, the LibGuides platform is not designed to display large amounts of data and data is displayed in a rigid way. There is no easy way to enter large amounts of data. Blogs and similar publishing platforms faced the same problems: while easy to edit, they lacked the flexibility we wanted and were not designed to import and display large amounts of data.

The library already had a website, <https://neiuiinfo.org>, that could support Structured Query Language (SQL) databases. To that end, we decided to publish our documentation to an online database that would then be accessible via the internet. This approach would require coding in HTML and PHP, a preprocessor that allows HTML to communicate with databases. Although complicated to set up, such an approach provided flexibility that others did not. Having decided to follow this course of action, our first step was to figure out how to get the data we wanted into this database. Our goal was to transfer the information from the notecards into our database. These cards contained two types of information: agency structure and publication information. Cards

CM 1.	COMMERCE AND COMMUNITY AFFAIRS DEPT.
CM 2.	Government and community services division
CM 3.	Statewide Employment and Training Section
CM 4.	International Business Office
CM 5.	Local Management Services Office
CM 6.	Tourism Office
CM 7.	Resources Conservation Office
CM 8.	Main Street Program
CM 9.	Job Training Coordinating Council
CM 10.	Office of the Small Business Utility Advocate
CM 11.	ENERGY AND RECYCLING Bureau
CM 12.	Coal Development and Marketing office
CM 13.	DO NOT USE
CM 14.	Small Business Division

Figure 1. Agency structure card for the Commerce and Community Affairs Department

containing agency structure are pink and list the internal structure, e.g., subagencies of main agencies, as shown in figure 1.

The card in figure 1 lists some of the subagencies that make up the Commerce and Community Affairs Department. This department has a class stem of “CM.” In the Nakata-Strange system, the main office receives a designation of “1,” and subagencies are numbered from “2” onward. Therefore, we know that an item with a call number beginning with “CM 6” was produced by the Commerce and Community Affairs Department’s Tourism Office.

Cards with information about publications are green and contain a listing of publications from each agency and subagency, as illustrated in figures 2–4.

In figures 2–4, the cards contain the issuing body, the associated call number class, subclass, and cutter, and a listing of titles or series published by that body. In figure 2, the call number here has a class stem “EP,” which designates the Illinois Environmental Protection Agency. The following “1” tells us that the main office is responsible for issuing these publications.

The cards in figures 3–4 give examples of Y-class call numbers. These are reserved for small boards and commissions, with class Y 3 indicating non-legislative boards and commissions and class Y 4 indicating legislative boards and commissions. In the examples in figures 3–4, the “Y 3” class indicates that the issuing body is a non-legislative commission. The following “C 93” is a cutter formed from the word *criminal*, and the “/2” is used to distinguish this particular board from others whose cutters were similarly formed from the word *criminal*. We therefore know that materials with call numbers beginning in “Y 3.C93/2” are produced by the Illinois Criminal Justice Information Authority.

In the Nakata-Strange system, as in SuDocs, there are many standardized serial numbers that remain consistent across agencies. These can be seen in figures 2–4. Serial numbers from 1 to 8 are reserved and remain the same across all

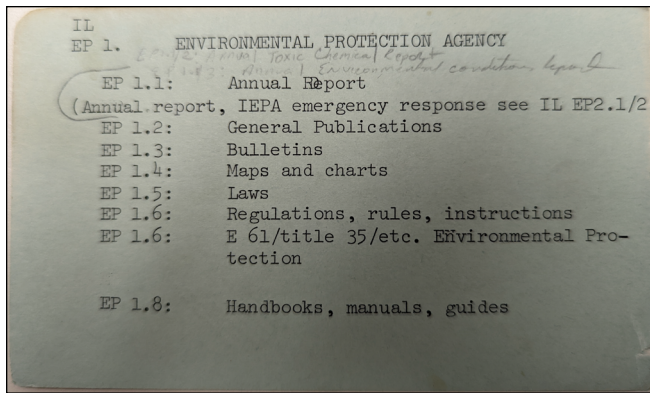


Figure 2. Title listing card for the Environmental Protection Agency's main office

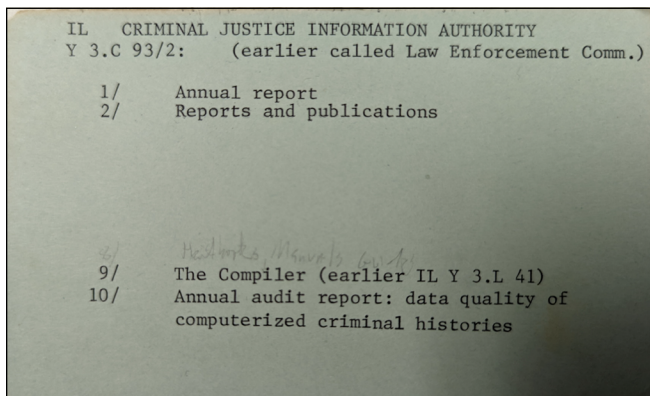


Figure 3. Title listing card for the Criminal Justice Information Authority (card 1)

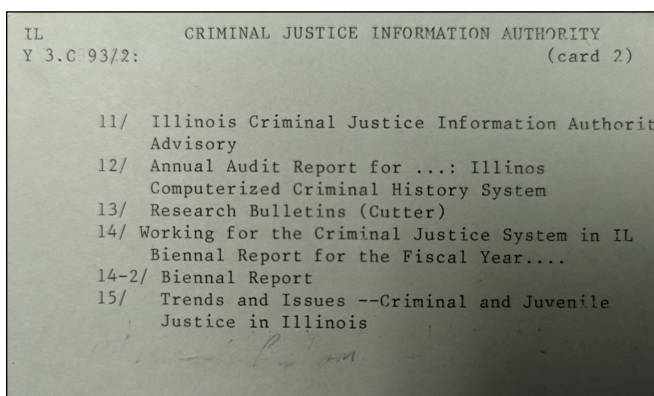


Figure 4. Title listing card for the Criminal Justice Information Authority (card 2)

agencies. For example, serial number 1 is reserved for annual reports and serial number 8 is reserved for handbooks, manuals, and guides. Serial number 2 is reserved for miscellaneous publications (usually monographs) that do not belong to a

category covered by the standardized serial numbers or to any other series. Serial numbers from 9 onward are assigned to individual series or serial publications. In figure 3 we see that serial number 9 has been assigned to issues of the periodical *The Compiler*.

We explored various options to transfer data from the cards to a database. One such option was scanning in the cards. However, we lacked a card-specific scanner and would have had to use a flatbed scanner. As can be seen in figures 2–4, much of the information on the cards consists of handwritten additions made after the cards were typed. The cards were also riddled with typos and corrections. This made it unlikely that optical character recognition would be effective. Even if scanning were feasible, there was no clear way to extract the information from the cards in a way that would allow us to turn this information into something structured and useful. To create a functional database, we would need to separate out call number stems, agencies, serial numbers, and titles, but this would have required human labor to parse this data. Scanning the cards would have produced little more than a digital surrogate of the original system, and we would have gained little additional benefit.

We also considered manually entering data from the cards. We began by entering data from the pink cards, which contain information about the structures of agencies. There were relatively few cards of this sort, so this was completed quickly. There were, however, many more green cards, as these listed every serial publication produced by all the agencies of the State of Illinois. Lacking the resources to manually enter this data, we need to explore other options.

Having ruled out both scanning and manually entering each card, we realized that we could use our library management system (LMS) to extract the relevant information from our catalog. This had two benefits: first, we would save time compared to either scanning or manual entry of data. Second, this method would ensure that our documentation would match our catalog, as opposed to worrying about whether we would need to retroactively reclassify materials that did not match the documentation. To extract this data, we ran a query in Alma, our LMS, to pull a list of all titles in our State Documents collection. We were able to obtain this list by querying all holdings located in our Government Documents collection, then narrowing this list down by looking only for call numbers classed with “other schemes” (as indicated by the MARC 852 first indicator “8”). We also wanted to populate our database with other useful information such as title, control number, and OCLC number, so this was added to our query. The results of this query are shown in figure 5 below.

To make this data more usable, we edited the results of our query in Microsoft Excel. This involved stripping out some local prefixes and breaking apart the call numbers into structurally relevant pieces: agency (or class stem), subagency, serial designation, and item number, as shown in figure 6.

Compound Layout

Title

Table

Location Name	Permanent Call Number Type	Permanent Call Number	MMS Id	OCLC Control Number (035a)	Title
Gov Docs	Other scheme	DOC. IL A 1.2:A 167/2	991001749505870	11950849	Elder abuse demonstration project : interim report to the Illinois General Assembly on Public Acts 83-1259 and 83-1432.
Gov Docs	Other scheme	DOC. IL OE1.2:W956	991001759505870	12046482	"Write on Illinois!": a users guide to scoring student essays.
Gov Docs	Other scheme	DOC. IL OE1.2:R332	991003089505870	12046446	Focus on reform : state action to improve schooling in Illinois.
Gov Docs	Other scheme	DOC. IL OE1.6:S741/2	991003099505870	12046469	Special education certification and approval requirements and procedures.
Gov Docs	Other scheme	DOC. IL Y3.H67/2.2G326	991003109505870	12046687	A generation too precious to waste : an investigative report submitted to the Illinois General Assembly /
Gov Docs	Other scheme	DOC. IL NR 1.24.1/	991003119505870	12046758	Conceptual models of erosion and sedimentation in Illinois /
Gov Docs	Other scheme	DOC. IL G 105.2:C 517	991003129505870	12047591	Report of the Governor's Chemical Safety Task Force.
Gov Docs	Other scheme	DOC. IL NR1.3:85/01	991003229505870	12125105	The economic effects of underground mining upon land used for Illinois agriculture /
Gov Docs	Other scheme	DOC. IL RE6.2:EC18/	991005299505870	3880059	Economical geology of Illinois.
Gov Docs	Other scheme	DOC. IL RE5.9:123	991008949505870	12253756	The life history of the shorthead redhorse, <i>Moxostoma macrolepidotum</i> , in the Kankakee River drainage, Illinois /
Gov Docs	Other scheme	DOC. IL Y4.L52.13/170	991012709505870	9189209	Directory of executive agencies and legislative liaisons.
Gov Docs	Other scheme	DOC. IL EP 3.13:978-985	99101279505870	8324150	Final water pollution control program plan /
Gov Docs NoCirc	Other scheme	DOC. IL IC 1.2:T 255 FICHE	991013039505870	11822459	Technology and the emergence of competitive market structures in regulated industries /
Gov Docs NoCirc	Other scheme	DOC. IL IC 1.2:E 38 FICHE	991013049505870	11823062	Structural solutions in the electric utility industry : a discussion of three approaches /
Gov Docs NoCirc	Other scheme	DOC. IL IC 1.2:T 772 FICHE	991013059505870	11823086	Distributor transportation tariffs for customer-owned gas /
Gov Docs NoCirc	Other scheme	DOC. IL IC 1.2:C 755 FICHE	991013069505870	11823100	Utility-sponsored conservation programs : a commission investigation /
Gov Docs	Other scheme	DOC. IL Y4.AG26/2:H434	991013189505870	12124074	Speaking out on health care : what they said, what they fear, what they believe, what they need /

Selection Steps

Figure 5. Results of a query in Alma for materials in the State Documents collection

This was achieved by locating various elements in the call number string such as the first digit, period, or colon. Breaking up the call numbers ensured that our database could be correctly sorted. Because the Nakata-Strange Classification System is similar to SuDocs we employed literature on sorting SuDocs to inform this process.²² The resulting data was then uploaded into our database.

Our database was structured to be as flexible as possible, yet required only three tables, as shown in the data model in figure 7. The “depts” table contains information about departments—their stem classes, names, and fields for potential future use, such as relator terms to indicate name changes or mergers of departments. The “subag” table is related to the “depts” table and contains information about subagencies. This table can also accommodate future information about name changes or mergers. The “il_titles” table contains information about all the titles in our Illinois Documents collection. Because we broke apart our call numbers before entering them into the database, we can relate this table to the other two by matching the class stem to the “depts” and the subagency number to the “subag” table. All tables have fields for notes.

Once our database was set up and the bulk of the data from our LMS was entered, we compared the list of agencies, subagencies, and serials with the documentation on our cards. This ensured that any uncataloged or withdrawn material would still be represented in our documentation. Titles and series entered from the cards were marked as such in the database to ensure that staff and patrons understood that these materials might not be held by the library. Although

comparing the cards to the database required some manual data entry, it was significantly less time consuming than entering all of the cards.

Having created our database, we now needed to make a functional platform that could be consulted when creating new call numbers or searching for titles. We added a directory to the web server that hosts our database (<https://neiuiinfo.org/ilgov/>) and created a website to display all this information within that directory. We designed this website around four goals:

1. To enable staff to create call numbers for newly received materials
2. To allow for browsing of publications by agency
3. To view the organizational structure of agencies
4. To provide information about the Nakata-Strange Classification System as an artifact of library history

To achieve this, we divided the website into three main sections. The “History” section provides a brief overview of government documents classification systems with specific attention to the system devised by Nakata and Strange. The “Structure” section provides information about the elements that compose a properly formed call number. And the “Departments & Agencies” section allows users to see a list of top-level agencies, then click through to see subagencies and all print publications of that agency. Using PHP to query the database every time it is visited ensures that the viewer receives the most current information, rather than a snapshot from a given time. It also means that given a variable (such as an agency name),

D2 =LEFT(C2,FIND(".",C2)-1)

	A	B	C	D	E	F	G	H
1	Permanent Call Number	Class Stem	Call_minus_stem	Subagency	Call_minus_subag	MMS Id	OCLC	Title
2	A 1.1/2:	A	1.1/2:	1	1/2:	9992159505870	8197256	Communi
3	A 1.1:	A	1.1:	1	1:	993194539505870	29040487	Annual re
4	A 1.10/2:	A	1.10/2:	1	10/2:	99784319505870	7235896	Aegis /
5	A 1.10:	A	1.10:	1	10:	994524299505870	7235633	News /
6	A 1.11:	A	1.11:	1	11:	991150079505870	5035179	State plan
7	A 1.11:1984/1985	A	1.11:1984/1985	1	11:1984/1985	991827649505870	10240951	State plan
8	A 1.11:1989/91-	A	1.11:1989/91-	1	11:1989/91-	992819699505870	21478296	Illinois Sta
9	A 1.12:	A	1.12:	1	12:	991621419505870	9504735	Plan for D
10	A 1.12:989/PH.I	A	1.12:989/PH.I	1	12:989/PH.I	992223559505870	18037820	1989 plan
11	A 1.13:	A	1.13:	1	13:	994524319505870	9472700	An Annual
12	A 1.14:	A	1.14:	1	14:	99905499505870	10733616	Network r
13	A 1.15:	A	1.15:	1	15:	991098199505870	13337010	Senior ne
14	A 1.17:	A	1.17:	1	17:	994524269505870	22188257	Elder Abu
15	A 1.18:	A	1.18:	1	18:	993205529505870	23676431	Report on
16	A 1.19:	A	1.19:	1	19:	994524279505870	26060320	Eldercare
17	A 1.2:A 165	A	1.2:A 165	1	2:A 165	991536839505870	17302934	Elder abus
18	A 1.2:A 167	A	1.2:A 167	1	2:A 167	994518849505870	7994299	Abuse and

Figure 6. Illustration of the procedure for breaking call numbers into their constituent elements

only the information relevant to that variable is displayed.

Thanks to the lessons learned from similarly derived classification systems, we knew that we did not need to start from scratch when crafting the text describing the Nakata-Strange Classification System. In the “History” section, for example, we provided a very brief overview, then supplied links to FDLP histories, to Nakata and Strange’s original text, and to similar classification systems used in other states (such as Arizona’s AzDocs, Wyoming’s WyDocs, and California’s CalDocs systems) to provide a reference for comparison. We likewise adapted much of the wording in the structure section from Nakata and Strange. Rather than go into detail regarding the formation of Cutters, we deferred to a third-party website that constructs Cutter-Sanborn numbers for the user.²³ Strategic links to outside sources significantly reduced the amount of documentation that we needed to produce, saving both time and effort while taking advantage of the benefits of web-based documentation.²⁴

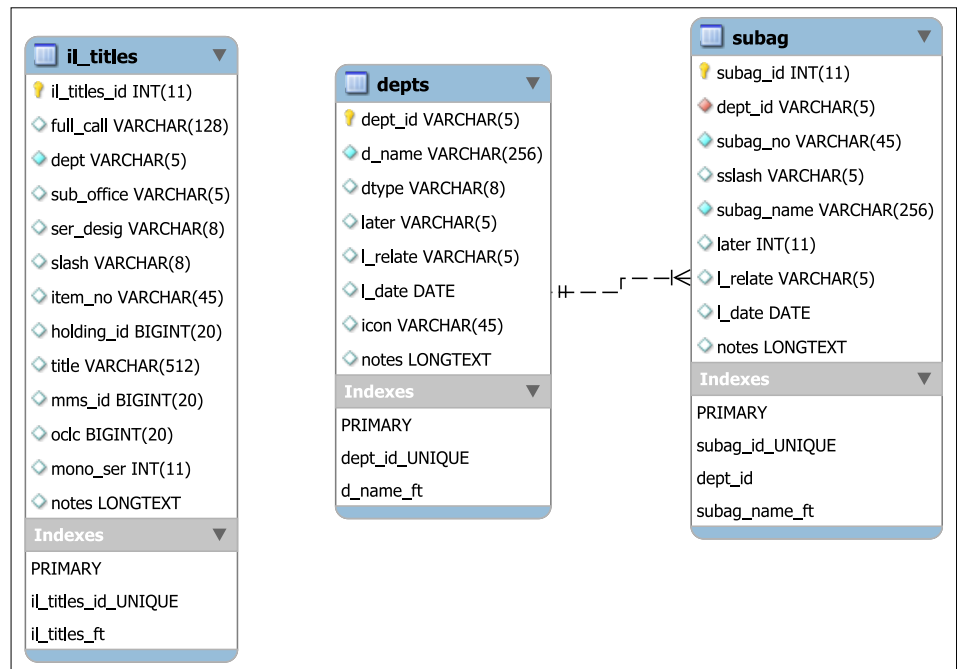


Figure 7. Data model for the database containing information about the Nakata-Strange Classification System

We included two other sections that are not necessarily helpful in creating new call numbers, but which provide context for other researchers who may find themselves in a similar situation to ours. The first is an “About” section, which

provides a brief outline of our goals and how we created the website. The second is a “Reports and Documents” section. This contains a dump of the raw data as well as downloadable PDF copies of the information in the database. Although the PDF data is not as easy to use as the web-based data, it allows users to have offline access to the data and encourages preservation of this data by making it available in an easily shared format.

A final feature implemented on the website is a search function, which, like other features of the website, uses PHP to connect to the database. This function has options for searching both agencies and titles. The agency search enables users to search for agencies, departments, and other governmental entities, many of which have similar or variable names. Subagencies often move between departments during periods of governmental restructuring, so this feature is an important tool for creating properly formed call numbers. The title search allows users to search monographic, serial, and series titles, preventing the creation of duplicate records and ensuring that titles within the same series are classed together.

Upon completion of the website, we gave library staff a brief introduction and tutorial so they could assist patrons with relevant research questions. A link was added to the NEIU Libraries’ Government Information LibGuide to provide easy access to patrons.

Presently, new titles and agencies need to be manually entered into the SQL database. Future work on the website may include a data-entry feature to ensure that staff who are less familiar with SQL will be able to contribute.

Findings

In creating documentation for our implementation of the Nakata-Strange Classification System, we encountered several unexpected benefits. Had we anticipated these benefits, we could have incorporated them into our planning stages. Fortunately, our database-based system of documentation was flexible enough to incorporate these benefits as we encountered them.

One benefit was the creation of a relatively complete listing of the print publications of the State of Illinois from 1968—the point at which Northeastern Illinois University became a print repository for the state of Illinois—onward. Although there are eighteen other libraries that collect Illinois’ publications, there is, as far as we know, no comprehensive listing of all state publications. The Illinois State Library’s *Publications of the State of Illinois* is the closest we have to this sort of list,²⁵ but it is issued between one and three times per year and there is no way to concatenate these lists into a single document. While assembling our documentation, we discovered a number of titles that were

never included in *Publications of the State of Illinois*. Because the Nakata-Strange System is based on SuDocs, it employs series designations. This means that our documentation lists monographic series, something that the *Publications of the State of Illinois* lacks. As our documentation not only included data from our ILS, but also additional data from the printed cards, we have records for many items which were ephemeral, uncataloged, or have since been withdrawn.

Another benefit is the creation of an outline structure of Illinois government from 1968 onward. Because the Nakata-Strange Classification System is provenance-based, each agency and sub-agency are assigned unique identifiers. By examining the years in which these agencies published, we can surmise that they were in existence during at least those years. The typed cards that were the basis for our database included some information about the creation and dissolution dates of some agencies. This information was included when available for potential future use. For example, the Department of Conservation (class “Co”) became the Department of Natural Resources (class “DNR”) in July 1995, and this was noted in our database. The information in our database could be combined with information from other sources to expand upon the basic structure we already have. The *Illinois Blue Book*,²⁶ for example, summarizes the state of government for each year, often noting changes to agencies and sub-agencies. Authority records, agency histories, and legislative and executive records could also contribute valuable information toward this end. Our website does not currently display information about agency creation, dissolution, or reorganization, but could be added later thanks to the built-in flexibility of our documentation.

A final benefit is providing staff with a broad overview of our state documents collection. Because we included not only cataloged materials, but titles from printed cards, we now have a sense of which portions of the collection need retrospective cataloging. Titles without catalog links are presumably uncataloged or missing. This information, combined with usage information, allows us to prioritize the areas of the collection that require further work and discover which areas our patrons value the most.

Conclusions

Planning for documentation is as important as creating documentation. This planning stage should determine the rationale for creating documentation and establish the intended audience. The intended audience, in turn, influences the level of detail required. An experienced audience—such as library personnel—will likely need less detailed documentation than patrons, for example. This will also assist in determining the platform that will host the documentation and whether it is public or private.

Researching similar types of documentation should also be a part of the planning process. It is very unlikely that any classification system (or, indeed, any other system) is wholly unique. Therefore, any documentation process should attempt to incorporate information from similar processes via copying or linking. There is rarely any need to reinvent the wheel. In our documentation of the Nakata-Strange Classification System we included links to Nakata and Strange's original documentation and to an outside Cutter table. We likewise drew inspiration from the FDLP's documentation of SuDocs. Doing so saved a considerable amount of time, and by relying on tested documentation we were able to be confident that our documentation would be equally useful.

We were able to save time by extracting as much data as possible from our library management system. The alternative, which was entering data from the preexisting notecards, was not a reasonable one. This also ensured that our documentation matched our catalog and, presumably, the material on the shelves. Unless practices and standards need to be updated, documentation should reflect the current situation, rather than an ideal one.

When creating documentation, the platform or technologies used to create this documentation should have a considerable amount of flexibility built in. This will ensure policies and procedures that were not discovered during the planning process can be accommodated. Likewise, benefits discovered during the creation of the documentation can be leveraged. In creating our documentation, we had not planned for the possibility that our documentation could be used to research the history of Illinois government. Because we used a well-designed SQL database, we were easily able to add new data columns that allowed us to link together various state agencies, creating a new way to look at Illinois' history.

This same flexibility can improve both access and longevity. As different users have different needs, the flexibility of our system allows users to look at the call number system from either an aggregate perspective or a very granular one. For example, a library user may only wish to see a list of classes and some information on interpreting call numbers, while staff may wish to examine lists of titles and series to determine how to classify new materials. The inherent flexibility of our system allows for that. Another way we built in flexibility was by providing regular dumps of our data in both PHP and PDF format.²⁷ Providing access to static documents that can be downloaded improves access to users working offline or who may prefer a print format. These documents are also simpler to archive and preserve, and having "multiple copies of files across different storage media and architectures, combined with geographic distribution, provides the greatest risk mitigation."²⁸ The nature of our call number system (or, indeed, any call number system) and the fact that many Illinois agencies are producing only digital documents means that our documentation is unlikely to substantially

change. This means that even an outdated PDF version of our documentation will likely remain useful, even if interactive data on the website is somehow deleted.

Documenting a call number system is not substantially different from documenting any other policy or procedure. Proper planning, research of similar documentation, and building flexibility and longevity into the documentation process can ensure that documentation is accessible and that the documentation process is not too arduous.

References and Notes

1. Corinne Bacon, *Classification* (Chicago: American Library Association, 1925), 1.
2. Lois Mai Chan, "Classification, Present and Future," *Cataloging & Classification Quarterly* 21, no. 2 (1995): 5–17, https://doi.org/10.1300/J104v21n02_03.
3. Rachel Ivy Clarke, "Library Classification Systems in the U.S.: Basic Ideas and Examples," *Cataloging & Classification Quarterly* 59, no. 2–3 (2021): 203–24, <https://doi.org/10.1080/01639374.2021.1881008>.
4. Yuri Nakata and Michele Strange, *Classification Scheme for Illinois State Publications: As Applied to the Documents Collection at the Library, University of Illinois at Chicago Circle, Chicago, Illinois* (Urbana: University of Illinois Graduate School of Library Science, 1974), <http://hdl.handle.net/2142/3824>.
5. "Depository Programs," Illinois State Library, accessed August 22, 2022, https://www.ilsos.gov/departments/library/depository_programs/.
6. Cf. Office of the Superintendent of Documents, *Legal Requirements & Program Regulations of the Federal Depository Library Program* (Washington, DC: US GPO, Office of the Superintendent of Documents, 2018), <https://purl.fdlp.gov/GPO/gpo89707>.
7. Cf. *An Explanation of the Superintendent of Documents Classification System* (Washington, DC: Depository Administration Branch, Library Division, Library Programs Service, US GPO, 1990).
8. Library of Congress, "Library of Congress Classification and Shelving Manual," last modified November 19, 2021, <https://www.loc.gov/aba/publications/FreeCSM/freecsm.html>.
9. Federal Depository Library Program, "Introduction to the Classification Guidelines," last modified August 25, 2022, <https://www.fdlp.gov/cataloging-and-classification/classification-guidelines>.
10. State Documents Collaborative Group, "State Agency Collections," GODORT, last modified July 28, 2020, <https://godort.libguides.com/c.php?g=1035038&p=7547038>.
11. National Library of Medicine, "Classification," 2022 winter ed., accessed July 28, 2022, <https://classification.nlm.nih.gov/>.
12. *Class PS8000: A Classification for Canadian Literature*, 4th

- ed. (Ottawa: Library and Archives Canada, 2004), https://publications.gc.ca/collections/collection_2016/bac-lac/SB4-31-2014-eng.pdf.
13. Kayla Willey, *Mormon Classification Schedules* (Provo, UT: Harold B. Lee Library, 2019), <https://cataloging.lib.byu.edu/wp-content/uploads/2013/04/Mormon-Classification-Schedules-complete-2019.pdf>.
 14. Roger Brisson, "Online Documentation in Library Technical Services," *Technical Services Quarterly* 16, no. 3 (1999): 1–19, https://doi.org/10.1300/J124v16n03_01.
 15. Hollie C. White, "Documentation in Technical Services," *Serials Librarian* 49, no.3 (2005): 48, https://doi.org/10.1300/J123v49n03_04.
 16. Kristi Bergland, Kalan Knudson Davis, and Stacie Truill, "CatDoc HackDoc: Tools and Processes for Managing Documentation Lifecycle, Workflows, and Accessibility," *Cataloging & Classification Quarterly* 57, no. 7/8 (2019): 463–95, <https://doi.org/10.1080/01639374.2019.1680470>.
 17. Anna R. Craft, "Online Documentation Portals in Library Technical Services: Shedding Light on Local Practices and Procedures," *Serials Review* 45 no. 3 (2019): 171–75, <https://doi.org/10.1080/00987913.2019.1645531>.
 18. Sandra Gall Urban, "Internal Documentation of Library Policies and Practices with LibGuides: A Survey and Analysis," *Journal of Electronic Resources Librarianship* 32 no. 3 (2020): 182–94, <https://doi.org/10.1080/1941126X.2020.1790947>.
 19. Martin D. Tomasi and Brad Mehlenbacher, "Re-Engineering Online Documentation: Designing Examples-Based Online Support Systems," *Technical Communication* 46, no. 1 (1999): 55–66.
 20. Silvio Peroni, David Shotton, and Fabio Vitali, "Tools for the Automatic Generation of Ontology Documentation: A Task-Based Evaluation," *International Journal on Semantic Web and Information Systems* 9, no. 1 (2013): 21–44, <https://doi.org/10.4018/jswis.2013010102>.
 21. Tomasi and Mehlenbacher, "Re-Engineering"; Peroni et al. "Automatic Generation."
 22. Jameson F. Conley and Lee Ann Nolan, "SuDoc Stem Call Number Sorting in Excel," *Earth and Mineral Sciences Library* (2013), <https://scholarsphere.psu.edu/resources/9f9856ad-30ba-4503-9a06-df5ebec702be>; Bert R. Boyce, J. Stuart Douglass, and Lloyd J. Rabalais, "A Sort Procedure for the Superintendent of Documents Classification," *Government Information Quarterly* 6, no. 2 (1989): 175–82, [https://doi.org/10.1016/0740-624X\(89\)90026-9](https://doi.org/10.1016/0740-624X(89)90026-9).
 23. "Cutter-Sanborn number," <http://cutternumber.com.ar/>.
 24. Tomasi and Mehlenbacher, "Re-Engineering."
 25. *Publications of the State of Illinois* (Springfield: Illinois State Library, 1961–).
 26. *Illinois Blue Book* (Springfield: Illinois Secretary of State, 1903–).
 27. "The Nakata-Strange Classification System," Northeastern Illinois University, accessed January 24, 2023, <https://neiu.info.org/ilgov/>, see "Reports & Documents" section.
 28. Leslie Johnston and Bonnie Lawlor, "Challenges in Preservation and Archiving Digital Materials," *Information Services & Use* 40, no. 3 (July 2020): 193–99.

Notes on Operations

Community Forward

Developing an Open and Free Cataloging Standard for Rare Materials

kalan Knudson Davis, Jessica Grzegorski, Elizabeth Hobart, and A. Tims

Descriptive Cataloging of Rare Materials (RDA Edition) (DCRMR) is a rare materials cataloging standard aligned with the official RDA Toolkit. DCRMR is informed by core principles of community and sustainability while employing open-source publication models and infrastructure. The RBMS RDA Editorial Group, composed of rare materials catalogers actively working in the field, is responsible for developing and maintaining DCRMR. This article discusses predecessor rare materials cataloging standards that led to the development of DCRMR, the principles and constraints that shaped DCRMR from its initial inception to eventual release, the method and technical tools used to achieve the RBMS RDA Editorial Group's outcomes, and future directions for development.

Descriptive Cataloging of Rare Materials (RDA Edition) (DCRMR) is a rare materials cataloging standard that aligns with Resource Description and Access (RDA).¹ The initial DCRMR release in February 2022 rewrote and restructured *Descriptive Cataloging of Rare Materials (Books)* (DCRM(B)) instructions.² DCRMR, unlike DCRM(B), is an integrating resource, published as a website, with updates framed as releases instead of revisions. While the first iteration of DCRMR contains instructions for cataloging rare books only, future releases will incorporate instructions for other formats.

DCRMR centers community. It was created, and is maintained, by the rare materials cataloging community for the rare materials cataloging community. Volunteers from an array of institutions in multiple countries have contributed labor and knowledge to the standard and its growth, both by serving on the RBMS RDA Editorial Group and its predecessor groups and by providing feedback at different junctures in the editorial process. DCRMR is officially published by the Bibliographic Standards Committee (BSC) of the Rare Books and Manuscripts Section (RBMS) of the Association of College and Research Libraries (ACRL), a division of the American Library Association (ALA). However, it was created by the international rare materials cataloging community.

DCRMR also centers sustainability. The BSC decided to create a stand-alone, integrating manual for RDA-aligned rare materials cataloging during the 2019 ALA Annual Conference. The RBMS RDA Editorial Group chose to create it as a website using a GitHub repository at the 2020 ALA Midwinter Meeting. Less than two months later, the COVID-19 pandemic caused massive personal and professional disruption. As our institutions closed, many of us were forced into ad hoc work-from-home situations where home and the office collided and, at times, conflicted. Then, in May 2020, the murder of George Floyd sparked a global movement toward justice-oriented community building, which became part of the warp and weft of creating DCRMR, as much of the technical infrastructure of DCRMR was built by an Editorial Group member who resides in the Powderhorn Park neighborhood of Minneapolis. Over the past two years, it has become clear that to be sustainable, DCRMR must rely on communal efforts, not individuals, to allow

kalan Knudson Davis (kkdavis@umn.edu) is the Rare and Special Collections Metadata Librarian at the University of Minnesota and has served as co-keeper of the DCRMR text since 2020. **Jessica Grzegorski** (grzegorskij@newberry.org) is Head of Cataloging at the Newberry Library and has served as co-chief editor of DCRMR since 2021. **Elizabeth Hobart** (efh7@psu.edu) is Interim Head of Cataloging and Metadata Services at Penn State and served as chief editor of DCRMR from 2019-2022. **A. Tims** (atims@mwa.org) is the Cataloging Initiatives Librarian at the American Antiquarian Society and has served as co-keeper of the DCRMR text since 2019.

for people to step back, step down, and maintain their own well-being. Toward that end, succession planning, open sharing of knowledge, and extensive documentation have been integrated into DCRM's workflows and planning.

DCRM centers open-source infrastructure. Built on a zero-dollar budget, it is available openly and freely on the web, aligning our cataloging standards with our professional values of transparency, accessibility, and equity. The Editorial Group utilized freely-available, well-established technical tools and software like Python, Ruby, GitHub, and Notepad++ to create DCRM, and the text is published under a Creative Commons license that allows others to adapt the text to their own needs or use the code base to develop their own infrastructure. Choosing an open-source model allows people to use and build on the work of the Editorial Group, just as the Editorial Group has used and built on the work of others.

DCRM is one contribution in the overarching history of rare materials cataloging standards development.

Background and Literature Review

Rare Materials Cataloging Standards

Rare materials have distinct cataloging needs, including describing individual issues and states and distinguishing individual copies of a manifestation. In an article on the development of rare book cataloging practices, Beth M. Russell highlights the “constant tension between descriptive bibliography and library cataloging.”³ Russell notes the fundamental differences between “mainstream” cataloging and rare materials cataloging, chiefly the artifactual nature of rare materials due to their method of construction.⁴ She highlights the philosophical differences between various cataloging codes of the past while emphasizing the importance of transcription, transposition, format and collation, and the robust nature of rare materials notes, access points, and copy-specific information.⁵ Similarly, Juliet McLaren and Jane Gillis compile a history and development of rare serials cataloging rules, emphasizing that rare serials “cannot be identified without careful transcription of their sometimes unique extended titles, their imprints (where present), and detailed notes.”⁶ Their analysis of the descriptive needs for rare serials walks through each area of description from International Standard Bibliographic Description (ISBD), detailing why previous rules were inadequate for identification and ending with a discussion of cataloging early reprints, republications, and access points.⁷

Throughout the history of rare materials cataloging, catalogers have sought to reconcile these needs with the strictures of cataloging codes. Russell's article discusses the reconciliation process between bibliography and G. Thomas

Tanselle's argument for “mutual understanding between bibliographers and catalogers” in the 1970s and the nature of recording physical facts.⁸ Russell then describes the evolution of rare materials cataloging through various past codes.⁹ Mary Burns continues this discussion, detailing the evolution of rare materials cataloging standards by summarizing the development history of *Bibliographic Description of Rare Books* (BDRB), *Descriptive Cataloging of Rare Books* (DCRB), and the various task forces leading to the development of the RBMS Policy Statements (RBMS PS), previously slated for incorporation into the RDA Toolkit.¹⁰ Burns, in her two-part article “RDA and Rare Books Cataloging,” compares the cataloging outputs of three bibliographic records created for the same book following the stipulations of DCRM(B), the *BIBCO Standard Record (BSR) RDA Metadata Application Profile* with rare materials provisions, and the original RDA Toolkit (2013) with its exceptions for early printed resources.¹¹ Burns notes that, even with the provisions and expectations, “there are description and transcription issues that rare materials catalogers need to address that RDA, a general cataloging standard, does not,” suggesting that the discrepancy between rare materials standards and general standards remains.¹²

In 2007, the BSC published DCRM(B) in collaboration with the Library of Congress.¹³ DCRM(B) was the first in the suite of *Descriptive Cataloging of Rare Materials* (DCRM) manuals. Meanwhile, the RDA Steering Committee (RSC) (formerly the Joint Steering Committee for Development of RDA) began developing RDA to replace the second edition of AACR2 as part of its strategic plan (2005–2009).¹⁴ The editors of DCRM(B) considered postponing work on the manual until the publication of RDA but elected to proceed, “given the progress already made on DCRM(B) and the considerable investment to date of time, labor, and money.”¹⁵ Subsequently, the BSC published five DCRM manuals covering additional formats: serials (2008), graphics (2013), cartographic (2016), manuscripts (2016), and music (2016).

After the publication of RDA in 2010, rare materials catalogers quickly began to consider the future of DCRM in relation to RDA.¹⁶ Dr. Robert Maxwell and John Attig investigated issues surrounding the future development of DCRM following the adoption of RDA, including the relationship between the standards, terminology used within the DCRM text, the organization (i.e., structure and arrangement) of the standard, descriptive aspects not traditionally covered by DCRM, DCRM's relationship to *International Standard Bibliographic Description for Older Monographic Publications (Antiquarian)* (ISBD(A)), and broader policy related to the application of DCRM(B).¹⁷ Their discussion paper also outlined differences between *Anglo-American Cataloguing Rules*, 2nd ed. (AACR2) and the original RDA Toolkit that are relevant to the revisions of DCRM, including differences in terminology, sources of information and use of brackets,

transcription practices, use of abbreviations, categorization of resources using RDA elements (e.g., media type, carrier type, etc.), recording terms from controlled vocabularies, and the formulation of access points for manifestations and items.¹⁸ In the years between Maxwell and Attig's discussion paper and the initial development of DCRM, this report has served as a touchstone for the intervening task forces and editorial groups.

Todd Fell and Francis Lapka posed the possibility of an international standard for rare materials cataloging.¹⁹ They outlined several requirements for this standard: an extension of a standard for general cataloging that acknowledges the needs of the specialist community, an international governing body with translations for use in diverse communities, embraces the prevailing international models for bibliographic description, is open and reusable, acknowledges the centrality of transcription in rare materials cataloging, integrates with the current data landscape, and is responsive to user needs.²⁰ Although this article did not address whether there should be a common standard for rare materials cataloging, it did offer one possible path forward for this work.²¹

The BSC formed the DCRM-RDA Task Force (2011–2012), which recommended revising DCRM(B) to align it with RDA.²² In 2012, the BSC formed the DCRM(B) for RDA Revision Group to complete this work.²³ The Program for Cooperative Cataloging (PCC) released the first iteration of the BIBCO Standard Record (BSR) on January 1, 2013.²⁴ The BSR includes DCRM-aligned provisions for cataloging rare materials developed in collaboration with the PCC Task Force for BSR for Rare Materials Based on RDA.²⁵ On April 22, 2013, the BSC issued a statement on the relationship between DCRM and RDA, stating that the BSC is “neutral . . . neither encouraging nor discouraging agencies regarding implementation of RDA-acceptable DCRM records.”²⁶ The statement provided interim guidance to catalogers using DCRM until an RDA-aligned version of DCRM could be published. For most rare materials formats, catalogers could choose either to follow the appropriate AACR2-based DCRM manual for description in conjunction with RDA for constructing access points or to create RDA records using the rare materials provisions in the BIBCO Standard Record.

At the 2013 ALA Annual Conference, the BSC expanded the charge of the DCRM(B) for RDA Revision Group to create RDA-aligned guidelines for all formats in the DCRM suite and renamed the group the DCRM for RDA Revision Group.²⁷ At the next ALA Annual Conference, in 2014, the Revision Group recommended authoring a set of policy statements for rare materials to accompany RDA instead of rewriting the DCRM suite. In response, the ACRL/RBMS Descriptive Cataloging of Rare Materials Task Force (2014–2017), an independent RBMS task force under the aegis of the BSC, was established to complete this project.²⁸ In 2016, the task force formally named its guidelines the RBMS

Policy Statements (RBMS PS) in alignment with the naming conventions of other RDA policy statements.²⁹ In 2017, the Descriptive Cataloging of Rare Materials Task Force submitted an initial draft of the RBMS PS and disbanded.³⁰ The BSC absorbed the editorial work on the policy statements, but much of the work was put on hold while the RSC revised the RDA Toolkit in response to the RDA Restructure and Redesign (3R) Project.³¹

Uses, Benefits, and Workflows of Git and GitHub in Library Science

Even a cursory glance into library science literature will illuminate the many and varied uses, benefits, and workflows of GitHub. Robin Camille Davis lists examples of the use of GitHub in a library context, including developing and sharing code or datasets, digital archives, or writing entire books, highlighting that “GitHub has become a site for academic transparency” and calling Git a “librarian’s dream tool.”³²

In addition to transparency, Davis discusses the following benefits of GitHub: version control, ease in creating documentation, and social networking.³³ Prayudi Utomo and Falahah describe the benefits of developing a serverless website hosted using GitHub Pages, including increased productivity, ease of website management and configuration, and reduced effort for code review while implementing new services.³⁴ In this instance, the authors chose GitHub Pages as their Content Delivery Network (CDN) because of its version tracking, robust collaboration support, and free static website hosting.³⁵ Yasset Perez-Riverol et al. remark that GitHub eases “sharing programming tasks between different remote contributors,” while the version control system provides transparency in the development process and the inbuilt social features support “peer review, commenting, and discussion.”³⁶

Keith Engwall and Mitchell Roe outline a typical Git workflow describing a main branch and the creation and merging of development branches onto the main branch.³⁷ Their six-step workflow used in a web development model includes creating a discussion issue for a proposed change, creating a development branch for the proposed change, editing code and testing the development branch until the change is complete, undergoing a development code review process, merging the development branch into the main branch, and pushing the changes to a production web server.³⁸ Because of the numerous benefits of GitHub for collaborative workflows and projects, it is central to the development of DCRM.

The Move toward DCRM

In August 2018, the BSC formed a subgroup to finalize the draft of the RBMS PS for publication in the RDA Toolkit.³⁹

In April 2019, the RSC completed the 3R Project and released a stable English-language version of the Toolkit. However, the substantial changes to the Toolkit meant that the RBMS PS could not be used in their current form.

Following discussions at the 2019 ALA Annual Conference, during which the rare materials cataloging community expressed a desire for a stand-alone manual, the RBMS Policy Statements Editorial Group decided to rewrite the DCRM suite as a single RDA-aligned integrating resource and write lightweight policy statements to link from the RDA Toolkit to the revised DCRM.⁴⁰ To reflect this change in scope, the group was renamed the RBMS RDA Editorial Group. In February 2020, the new manual was officially named *Descriptive Cataloging of Rare Materials (RDA Edition) (DCRMR)*.⁴¹

The RBMS RDA Editorial Group consists of 10–14 members. One or two members serve as chief editors and are responsible for Editorial Group planning, finalizing editorial decisions, maintaining high-level consistency across the text, and liaising with external groups as appropriate. In addition, at least two members serve as keepers of the text (also called keepers), who are responsible for developing and maintaining the GitHub deployment and maintaining the canonical version of the text. All group members play an editorial role by participating in the drafting and revision of text and in the collaborative decision-making process.

Principles and Constraints

DCRMR was conceived and built to meet the need of the rare materials cataloging community for a stand-alone manual, using language that will be familiar to catalogers and clear cataloging instructions with citation numbers to assist in citing a particular instruction. To support practical applications of the DCRMR instructions, all examples represent real-world objects and descriptions to better reflect cataloging in practice.

While earlier DCRM manuals were published as monographs, DCRMR is an integrating resource, which allows the text to be responsive to changes in RDA. In addition, the manual is published online as an open-access resource, ensuring broad availability. DCRMR is available to all interested users for free, both via the internet and via a downloadable PDF, allowing users to print the document if they wish. DCRMR is licensed with a Creative Commons Attribution NonCommercial ShareAlike (CC BY-NC-SA) license, allowing others to adapt the text to their local needs.⁴²

The Editorial Group has sought to maintain transparency throughout the process. Because the text is hosted on GitHub, users are able to submit issues (a discussion thread on problems encountered or future developments) and read discussions of those issues. GitHub is a version control system, allowing users to see how the text has changed over

time. Finally, the Editorial Group retains earlier versions of the downloadable PDF for any users wishing to consult earlier versions of the text.

Material constraints have impacted publication. DCRMR is created and maintained by a volunteer committee. Editorial Group members receive no compensation and need to schedule around other personal and professional commitments. The Editorial Group prepared the first iteration of DCRMR between January 2020 and July 2021. During this time, many Editorial Group members worked remotely or on hybrid schedules, allowing for extra writing time. At the same time, the global events that occurred during 2020 and 2021 took a significant toll on group members. For past DCRM manuals, the Editorial Group met in person to discuss editorial decisions. The pandemic forced the RBMS RDA Editorial Group to collaborate virtually. The group met in person for the last time during the 2020 ALA Midwinter Meeting, about seven weeks before lockdowns began in the United States. Although the group met consistently throughout the pandemic, they never expected that work would be exclusively virtual. The inability to meet in person, combined with the significant stress posed by the events of 2020 and 2021, delayed the initial publication by a year from the original timeline.

In addition, the Editorial Group created DCRMR without any financial support. They rely instead on freely-available tools with no paid developer support. At times, this leads to problems, such as advertisements appearing as part of the Google Programmable Search Engine or minor technical difficulties.⁴³

Method

The RBMS RDA Editorial Group needed to create and sustain an iterative, integrating resource that would incorporate additional DCRM manuals in the future, be responsive to changes in RDA (itself an integrating resource), and be maintained and updated by a succession of future group members. To do so, the group developed a cyclical workflow that oscillates between Google Docs and GitHub and that is buttressed by extensive documentation and facilitated by both Python scripts and human labor.

The Initial Text

In fall 2019, the Editorial Group began writing what would become DCRMR. To begin, they atomized the DCRM(B) text into multiple Google documents, one RDA element per document. The Editorial Group omitted examples, textual numbering, and text about prescribed punctuation at this time because they intended to holistically review and standardize their approach to these topics. The group edited the

text to bring it into alignment with RDA terminology and incorporate decisions made in the now-superseded RBMS PS. They raised smaller issues using the Google Docs comment feature and discussed larger questions through the Editorial Group listserv and during virtual meetings.

During this revision stage, the Editorial Group also made decisions on the structure of the text, which they later built into the website's architecture. To respond to the community's desire for a manual in workflow order, they decided to retain a chapter structure rooted in ISBD. Significant changes to the order of the text from DCRM(B) include the following:

- Restructured elements related to statements of responsibility as an independent chapter. In DCRM(B), instructions related to title and statement of responsibility are both in chapter 1, "Title and statement of responsibility area"; in DCRM(R), instructions for statement of responsibility are in chapter 2, "Statement of responsibility."
- Incorporated notes into the relevant chapters. For example, in DCRM(B) all instructions for notes are found in chapter 7, "Note Area" (7B3–7B5); in DCRM(R), instructions for the element Note on title are found in chapter 1, "Title" (1.29). DCRM(B)'s chapter 7, "Note Area," became DCRM(R)'s chapter 9, "Additional notes."
- Added placeholder chapters to hold space for the integration of additional DCRM manuals in the future. Specifically, DCRM(R) includes chapter 4, "Mathematical details," for cartographic description and chapter 7, "Numbering of serials," for serials description.

Once the Editorial Group determined the order of the text, they crafted a citation scheme. Since DCRM(R) is an integrating resource which will both incorporate additional instructions and respond to changes in RDA, they decided to use a four-part decimal-based citation scheme to allow for greater flexibility and extensibility. The citation scheme is a mix of numbering that carries meaning (for example, the numbers in chapter 3, "Edition," start with "3") and numbering that is arbitrary (for example, most element numbers started with ".2" to allow space to insert elements earlier in the chapter).⁴⁴

Migration into GitHub

With the order of the text in place, the keepers could build the initial website architecture, and the Editorial Group could start migrating the text from Google Docs into the GitHub repository. During summer 2020, keepers conducted training sessions for interested Editorial Group members, demonstrating how to format the text using Markdown, a lightweight markup language, and save the resulting Markdown files to the GitHub repository. Throughout the summer

and into early fall, the keepers and group members migrated the text as it was completed and reviewed. Each of the atomized Google Documents, one RDA element per document, became the basis for the Markdown files. From this point, completed drafts of the Markdown files containing instruction text lived in the GitHub repository and could be viewed as a whole and in context on the website. Working copies were kept in Google Docs, where editing, revision, and review occurred.

Reviewing the newly migrated text also allowed the chief editors and keepers to see variations in writing style, textual formatting, and input conventions. To ensure uniformity across the text, the keepers developed a detailed style sheet that included instructions on how to mark up and input text.⁴⁵ Some guidelines are quite granular. (For example, "Alternative rules are introduced by 'Alternative rule,' formatted in bold and followed by a period. The period is not in bold.")⁴⁶ Others provided broader, more flexible instructions. (For example, "Alphabetized lists preferred. However, numbered lists are sometimes appropriate to the text or necessitated by the display.")⁴⁷ Chief editors and keepers discussed decisions about style. The chief editors brought some questions, like link formatting, to the whole Editorial Group for discussion. To minimize future variations in the style and formatting of the text, the Editorial Group centralized the editing of Markdown files in GitHub as part of the keeper role.

Developing Cyclical Workflows

Once the keepers migrated the text to GitHub, the Markdown files served as the canonical copy of DCRM(R), and the Editorial Group members could read and review it holistically. The keepers export the entire text from GitHub Markdown files into Microsoft Word documents using a Python script that they developed for this purpose. This is usually done on a chapter level, although more targeted text selections are sometimes desired. The Word documents are then uploaded to Google Drive and converted to Google documents. Editorial Group members can then perform detailed, line-level textual markup on these working files and conduct associated paratextual conversations using familiar tools. Group members read, analyze, and suggest revisions to the text using the "Suggest" mode. The chief editors then review all suggested changes, rejecting undesired changes and leaving approved changes as suggestions.

This process allows the chief editors to maintain a high-level view across the text and ensure consistent decisions throughout. The keepers then implement the changes in the Markdown files in GitHub and correspond with the chief editors for clarification as necessary. For complicated edits (for example, reordering text, which affects both the text undergoing edits and any link to or citation of that text), the chief editors and keepers may utilize tracking spreadsheets

and other supplemental, ad-hoc documentation to complete all needed changes.

Once the text is ready for feedback by a community constituency, such as the RBMS BSC or the international rare materials cataloging community, the text is frozen. The reviewing community is directed to the website for the development fork, which is generated from the revised text in the GitHub repository, where they may read and navigate DCRMR as a hypertext document. This GitHub fork is an exact copy of the DCRMR repository; however, the fork's environment, which determines the content of its website, is set to the development branch of the repository, allowing the changes to the Markdown files to be reviewed in context while leaving the production website, which displays the canonical version of the text, unaltered during the review period. The Editorial Group uses Google Forms to collect feedback. During the review period, links to the forms are added to the DCRMR website, often on the chapter level. This has the advantage of gathering all feedback in a central location.

Following the review period, the chief editors review all feedback. The keepers make small bug fixes and correct minor issues, such as typos and broken links. More substantive issues may be addressed by the chief editors or through Editorial Group discussion and then incorporated into the text; some issues are flagged for future discussion. Once the Editorial Group completes post-review edits, the editorial cycle begins again. Figure 1 illustrates the cyclical editorial workflow and the tools involved in DCRMR revision.

Technical Tools

The technical tools chosen to build DCRMR are rooted in the same open-source and community-forward principles and limited by the same budgetary constraints that drove its initial creation. Many of the technical tools are available for free and support asynchronous web development. They facilitate the work of multiple contributors located in different geographic areas with varying levels of technical expertise. The keepers used the following tools heavily throughout the DCRMR development process.

GitHub

GitHub is the largest open-source community in the world; it contains millions of projects with a focus on growing skills and helping others by building healthy communities of contributors.⁴⁸ Discussions surrounding GitHub began when Liz Adams and Francis Lapka prepared an internal report on the various hosting options at the request of the DCRMR editors.⁴⁹ GitHub offered several advantages over other hosting options, including version control, issue tracking, public access to wiki documentation, pull requests, project planning

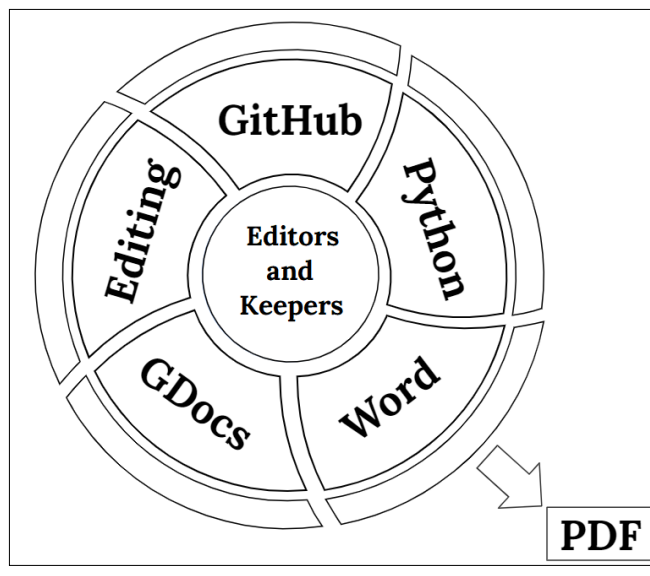


Figure 1. The cycle of tools used in DCRMR revision.

tools for future releases, and a lightweight formatting syntax (i.e., Markdown). Finally, GitHub offered a range of scenarios for publication such as publishing as a single Markdown file (similar to the implementation of *Describing Archives: A Content Standard*) or as multiple files hosted within a repository using github.io or a custom domain.⁵⁰ Ultimately, the RBMS RDA Editorial Group decided to implement GitHub with multiple files hosted on a custom domain, publishing DCRMR on a subdomain of the RBMS website (<https://bsc.rbms.info>).

DCRMR's Repository

The GitHub repository contains the text of DCRMR and the codebase that powers the bsc.rbms.info website on GitHub Pages. The DCRMR repository also hosts various picture files, assets, and scripts used in creating and maintaining the website and text. The canonical, current, and approved version of the text is contained in the main branch of the repository. Revisions to DCRMR text are contained in branches and merged upon the chief editors' approval. Figure 2 illustrates GitHub branches as used in DCRMR revisions.

Although much emphasis has been placed on the reasoning behind choosing GitHub as a home for the development of DCRMR, the keepers rely on many other free and open-source tools to ease the upkeep and ongoing maintenance of the website. Keepers working in a Windows environment must download Git for Windows, which is a free and open-source BASH emulation allowing Windows users to run Git from the command line.⁵¹

In the deepest recesses of DCRMR's heart is Ruby, a free and open-source programming language with an emphasis

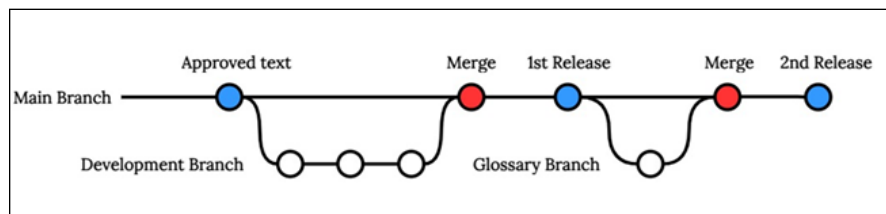


Figure 2. GitHub branches in DCRM revisions.

on simplicity, productivity, and elegance.⁵² Ruby utilizes a standard format for distributing programs and libraries in a “gem.” Jekyll is a static site generator installed using Ruby. The Jekyll gem, along with several other Ruby gems, are installed using Git Bash. The Jekyll gem takes the Markdown files containing the DCRM text and converts them into a complete, static website. Again, the premise of Jekyll is rooted in openness and configuration simplicity with an emphasis on content.⁵³ Because DCRM is a tool created by and for catalogers, simplicity, ease of software maintenance, and freely available tools are paramount.

DCRM uses Minimal Mistakes, a flexible two-column Jekyll theme, for creating and customizing the website’s presentation. The Minimal Mistakes theme includes all the assets, HTML layouts, and cascading style sheets that give the website its overall look and feel.⁵⁴ The keepers carefully document customizations to DCRM’s implementation of Minimal Mistakes to ensure that users of the DCRM website will continue to have a similar end-user experience as future Minimal Mistakes releases are tested and implemented.⁵⁵

In addition to using all the development tools above, the keepers use Notepad++, an open-source code/text editor, to create and edit the Markdown files in the DCRM GitHub repository.⁵⁶

Jupyter Notebooks and Python

The keepers developed the Python script, which is used to compile the Markdown files into a Word file, in an environment that upholds the same basic principles and tenets as DCRM itself. Anaconda Navigator is a desktop application that manages integrated applications, packages, and environments in an open-source, user-friendly, and community-centered development platform with open documentation, describing itself not as a company but rather as a movement.⁵⁷ This resonates strongly with the underlying principles of DCRM, which are as much about a movement toward aligning our professional values with cataloging rules as they are about rare materials cataloging.

The keepers created the Python script in Anaconda Navigator’s Jupyter Notebooks. The script is iterative in nature and evolves over time, enabling the cyclical editorial process

between GitHub and Google Docs. The keepers test the script in a branch of the DCRM GitHub repository and, once they have sufficiently tested the improvements, it is merged into the main repository.⁵⁸ Recent scripting improvements include preserving formatting and DCRM’s structure when converting from Markdown files to Word Documents utilizing *py pandoc*, a universal

document converter, and *docxcompose*, a Python library for concatenating and appending Microsoft Word (.docx) files. The editable script allows for the structure of DCRM text to change over time as sections of instructions are drafted and new Markdown files are added to the static GitHub Pages hosted website.

Google Docs

Through 2019, the Editorial Group primarily used Google Docs as a platform to craft the RBMS PS. As mentioned above, Google Docs remains an integral part of the group editing and revision process. Google documents are still utilized heavily in the DCRM revision and review cycle, but solely as a way for the Editorial Group to collect feedback and to further refine the text for the next DCRM GitHub release.

Succession Planning and Sustainability

The long-term sustainability of DCRM depends on not relying on any single person’s technical skills, availability, or institutional memory. It will be a multi-year project to incorporate all of the formats in extant DCRM manuals, and it will require a range of skills and contributions in cataloging knowledge and format specialties. Likewise, maintaining and updating the website for an indefinite period will also require the skills of many GitHub contributors. To facilitate sustainability, the Editorial Group is taking a multi-pronged approach: collaboration in key roles, active succession planning, and extensive documentation.

Membership in the RBMS RDA Editorial Group will shift over time. To facilitate changes in membership, the Editorial Group established a model of assigning co-chief editors and co-keepers. This distributes responsibility across multiple individuals; if one person is busy, the other person can usually step in to make sure the project continues to move forward and deadlines are met. Deadlines can and have been moved, as well.

Additionally, the Editorial Group established shared accounts for activities in GitHub so that access is not tied to a single individual but rather to member roles. The DCRM repository is owned by the RBMS Bibliographic Standards

Table 1. Number of DCRMR Users from the Top Twenty Countries as of May 25, 2022.

Number of users	Country
2,256	United States
323	United Kingdom
175	Canada
74	Australia
52	Germany
42	Netherlands
36	Finland
33	Philippines
31	China
26	South Africa
24	Japan
19	Austria
18	France
15	Spain
15	Italy
15	New Zealand
14	India
12	Ireland
10	Hong Kong
10	Sweden

Committee GitHub account, `rbms-bsc`, which provides access to current maintainers and contributors. The Editorial Group's GitHub account, `dcrmr-development`, owns the forked development repository, and the chief editors use it to close issues after the resolution of an editorial discussion. Keepers of the text generally complete revisions to DCRMR text, website code, and scripts by using personal GitHub accounts with commit access to the repository.

To ensure continuity, the Editorial Group has established staggered terms for the chief editors. Terms change July 1, following the annual volunteer cycle of ACRL; the incoming chief editor is selected by the previous spring. The keepers are working to establish a similar staggered succession model, following a three-year cycle of incoming, established, and emerita positions.

The DCRMR repository contains a wiki with official documentation both for internal and external audiences.⁵⁹ The Editorial Group uses the wiki to host internal documentation on DCRMR's editorial and style guidelines, and citation scheme; instructions on website maintenance, running scripts, and setting up computers to perform DCRMR editing via GitHub Desktop and a local environment; and templates for new DCRMR text. Other documentation for both the Editorial Group and the general public includes

a DCRMR FAQ page, current and historical RBMS RDA Editorial Group membership, reported errata, and resources on succession planning and leadership transitions. In alignment with DCRMR's principles on succession planning, the wiki documentation on the Python script evolves over time as new keepers take on roles within the organization of the Editorial Group. As many catalogers are just starting to actively build skills in Python and GitHub, the documentation helps to build confidence in successive keepers, guiding them through the steps of downloading Anaconda Navigator, installing Python packages, placing Markdown files, and running the script or creating a Ruby/Jekyll environment on their local machines for website development and testing.

Outcomes

The BSC officially published DCRMR on February 2, 2022, following a vote from the RBMS Executive Committee. At the time of this writing, DCRMR has been used to create or edit 450 records in OCLC. DCRMR has generated global interest. One hundred and fifty participants from eight countries spanning three continents attended the public hearing sessions on DCRMR in December 2021. As of May 25, 2022, Google Analytics shows access from 3,361 users from seventy-four countries, representing six continents (see table 1).

In addition, because the manual is published in GitHub, other communities can easily adapt DCRMR. By cloning the repository, other groups can use DCRMR's code to build and develop new texts. The chief editors and keepers of the text have already begun meeting with other cataloging groups to discuss possibilities for adapting the repository for their own uses.

Future Directions and Development

DCRMR is currently a minimum viable product incorporating instructions for rare book cataloging only. The RBMS RDA Editorial Group will complete the glossary for DCRMR later this year. In the longer term, the Editorial Group plans to incorporate instructions for the remaining five formats covered in the original DCRM suite, starting with graphics. The group expects to complete the graphics instructions in 2023. The Editorial Group documents ongoing maintenance and future work in the DCRMR GitHub repository.⁶⁰ These tasks include updating the early letterforms and brevigraphs tables in DCRMR, incorporating additional examples, and drafting sections on pre-cataloging decisions and other topics.

Like RDA, DCRMR is an integrating resource that will be updated over time, and editorial work on the standard follows an iterative process. The RSC generally releases updates of the RDA Toolkit four times a year.⁶¹ The Editorial Group will review the release notes after each update and make any

necessary changes to DCRM so that it remains aligned with RDA. Major changes to RDA that will require revisions to DCRM include revisions to RDA element names or definitions and the deprecation, or phasing out, of elements over time. The Editorial Group will also respond to changes in best practices for rare materials cataloging. Before any major updates to DCRM, particularly before the integration of instructions for additional formats, the Editorial Group will solicit and carefully consider community feedback.

Along with future release cycles for revised and new sections of DCRM instructions, the freely hosted infrastructure will be updated and rigorously tested as developers release new versions and patches for the various software and tools that power the website, such as Git, GitHub, Ruby, Jekyll, and Minimal Mistakes. Future technical developments also include minting a Digital Object Identifier (DOI) for future GitHub releases of the DCRM text.

By the end of 2023, the Editorial Group expects to complete the first iteration of lightweight policy statements for rare materials cataloging. The policy statements will accompany the RDA Toolkit and will link to relevant instructions in DCRM. The first iteration will cover rare books only; the Editorial Group will add statements covering additional formats to the Toolkit as instructions for the remaining formats are incorporated into DCRM. In conjunction with the policy statements, the Editorial Group will also develop a rare materials metadata application profile for use with RDA, which will outline elements that are mandatory or recommended.

Conclusion

DCRM is a standard made by the rare materials cataloging community for the rare materials cataloging community. The RBMS RDA Editorial Group followed the guiding principles

of accessibility, openness, and sustainability throughout the development of the standard. Because DCRM is hosted and built with free, open-source tools, such as GitHub and Jekyll, any cataloger may access and use the standard at no subscription cost. Under the provisions of DCRM's Creative Commons license, catalogers, individual institutions, and other organizations can adapt the text to their needs or use the base code in GitHub to develop other open cataloging standards.

The Editorial Group is committed to transparency and open collaboration. Anyone interested in the development of DCRM may read and comment on the issue threads in DCRM's GitHub repository or consult the extensive documentation posted in the Editorial Group's wiki. The use of open, collaborative, and familiar tools such as Google Docs ensures that group members with varying levels of technical expertise can participate equally in the editorial process.

Finally, the Editorial Group selected open tools and developed an editorial process with sustainability in mind. GitHub and Python, for example, are well established; thriving communities of users across many domains continue to implement these tools in a variety of applications. The use of Python scripts, in particular, automates many of the routine maintenance tasks for DCRM, freeing time for editorial work and the ongoing development of the website. The Editorial Group's model of staggered terms for co-chief editors and co-keepers, as well as wiki documentation on succession planning and onboarding new group members, bolsters the long-term sustainability of DCRM.

The RBMS RDA Editorial Group, a dedicated group of volunteers who work in the field, is committed to developing and supporting a standard that is broadly useful to the rare materials cataloging community. It takes a village to raise a cataloging standard, but it takes a community to make it thrive. Feedback from and dialogue with peers working in rare materials cataloging are essential to the ongoing relevance and utility of DCRM.

References

1. Descriptive Cataloging of Rare Materials (RDA Edition), ed. RBMS RDA Editorial Group, Bibliographic Standards Committee, Rare Books and Manuscripts Section, Association of College and Research Libraries, accessed May 27, 2022, <https://bsc.rbms.info/DCRM>; RDA Steering Committee, "RDA Toolkit," accessed May 27, 2022, <https://access.rdatoolkit.org>.
2. *Descriptive Cataloging of Rare Materials (Books)*, ed. Bibliographic Standards Committee, Rare Books and Manuscripts Section, Association of College and Research Libraries (Washington, DC: Cataloging Distribution Service, Library of Congress, 2011), <https://rbms.info/files/dcrm/dcrmb/DCRMB3.pdf>.
3. Beth M. Russell, "Description and Access in Rare Books Cataloging: A Historical Survey," *Cataloging & Classification Quarterly* 35, nos. 3–4 (2003): 492, https://doi.org/10.1300/J104v35n03_10.
4. Russell, "Description and Access in Rare Books Cataloging," 493.
5. Russell, "Description and Access in Rare Books Cataloging," 494–96.
6. Juliet McLaren and Jane M. Gillis, "Is This Rule Necessary? A Discussion of New Rules for Rare Serials," *Cataloging and Classification Quarterly* 43, no. 1 (2006): 41, https://doi.org/10.1300/J104v43n01_04.
7. McLaren and Gillis, "Is This Rule Necessary?," 43–51.

8. Russell, "Description and Access in Rare Books Cataloging," 497.
9. Russell, "Description and Access in Rare Books Cataloging," 499–514.
10. Mary Burns, "RDA and Rare Books Cataloging, Part 1," *Library Resources & Technical Services* 62, no. 4 (2018): 160–62, <https://doi.org/10.5860/lrts.62n4.160>.
11. Burns, "RDA and Rare Books Cataloging, Part 1," 160.
12. Mary Burns, "RDA and Rare Books Cataloging, Part 2," *Library Resources & Technical Services* 63, no. 1 (2019): 25, <https://doi.org/10.5860/lrts.63n1.4>.
13. *Descriptive Cataloging of Rare Materials (Books)*.
14. RDA Steering Committee, "About RDA," accessed May 27, 2022, <http://www.rda-rsc.org/content/about-rda>.
15. *Descriptive Cataloging of Rare Materials (Books)*.
16. RDA Steering Committee, "RDA Frequently Asked Questions," accessed May 27, 2022, http://rda-rsc.org/content/rda_faq#8.
17. Robert Maxwell and John Attig, "Reconsidering DCRM in the Light of RDA: A Discussion Paper," accessed May 27, 2022, https://rbms.info/files/committees/bibliographic_standards/committee-docs/DCRM_RDA-DP-20101214.pdf.
18. Maxwell and Attig, "Reconsidering DCRM in the Light of RDA," 6–8.
19. Todd Fell and Francis Lapka, "ISBD and DCRM into RDA: An Opportunity for Convergence?" *Cataloging and Classification Quarterly* 54, nos. 5–6 (2016): 282–90, <https://doi.org/10.1080/01639374.2016.1190436>.
20. Fell and Lapka, "ISBD and DCRM into RDA," 286–89.
21. Fell and Lapka, "ISBD and DCRM into RDA," 290.
22. "Final Report of DCRM-RDA Task Force," October 10, 2012, 3, https://rbms.info/files/dcrm/rda/FinalDCRMRDAReport_20121010.pdf.
23. Meeting minutes of RBMS Bibliographic Standards Committee at ALA Midwinter Conference, January 26, 2013, 7–8, <https://rbms.info/files/committees/minutes/2013/bibstandminutes13m.pdf>.
24. *BIBCO Standard Record (BSR) RDA Metadata Application Profile* (Washington, DC: Program for Cooperative Cataloging, 2020), 4, www.loc.gov/aba/pcc/bibco/documents/PCC-RDA-BSR.pdf.
25. Meeting minutes of RBMS Bibliographic Standards Committee, January 26, 2013, 12.
26. Francis Lapka, email message to DCRM Users' Group mailing list, April 18, 2013, <https://listserver.lib.byu.edu/pipermail/dcrm-l/2013-April/003138.html>.
27. Meeting minutes of RBMS Bibliographic Standards Committee at ALA Annual Conference, June 29, 2013, 5–6, <https://rbms.info/files/committees/minutes/2013/bibstandminutes13a.pdf>; Meeting minutes of RBMS Bibliographic Standards Committee at ALA Midwinter Conference, January 25, 2014, 5, <https://rbms.info/files/committees/minutes/2014/bibstandminutes14m.pdf>.
28. "ACRL/RBMS Descriptive Cataloging of Rare Materials Task Force," Rare Books and Manuscripts Section, Association of College and Research Libraries, accessed May 27, 2022, <https://rbms.info/acrl-rbms-descriptive-cataloging-of-rare-materials-task-force/>.
29. "ACRL/RBMS Descriptive Cataloging of Rare Materials Task Force."
30. "ACRL/RBMS Descriptive Cataloging of Rare Materials Task Force."
31. Meeting minutes of RBMS Bibliographic Standards Committee at ALA Annual Conference, June 24, 2017, 6, <https://rbms.info/files/committees/minutes/2017/bibstandminutes17a.pdf>; Meeting minutes of RBMS Bibliographic Standards Committee at ALA Midwinter Conference, February 10, 2018, 7–8, <https://rbms.info/files/committees/minutes/2018/bibstandminutes18m.pdf>.
32. Robin Camille Davis, "Git and GitHub for Librarians," *Behavioral & Social Sciences Librarian* 34, no. 3 (2015): 163–64, <https://doi.org/10.1080/01639269.2015.1062586>.
33. Davis, "Git and GitHub for Librarians," 158.
34. Prayudi Utomo and Falahah, "Building Serverless Website on GitHub Pages," *IOP Conference Series: Materials Science and Engineering* 879 (2020): 4, <https://doi.org/10.1088/1757-899X/879/1/012077>.
35. Utomo and Falahah, "Building Serverless Website on GitHub Pages," 1.
36. Yasset Perez-Riverol et al., "Ten Simple Rules for Taking Advantage of Git and GitHub," *PLoS Computational Biology* 12, no. 7 (2016): 1, <https://doi.org/10.1371/journal.pcbi.1004947>.
37. Keith Engwall and Mitchell Roe, "Git and GitLab in Library Website Change Management Workflows," *code4lib Journal* 48 (2020), <https://journal.code4lib.org/articles/15250>.
38. Engwall and Roe, "Git and GitLab in Library Website Change Management Workflows."
39. Meeting minutes of RBMS Bibliographic Standards Committee at ALA Midwinter Conference, January 26, 2019, 10, <https://rbms.info/files/committees/minutes/2019/bibstandminutes19m.pdf>.
40. Report of RBMS RDA Editorial Group, April 27, 2020, 1, https://rbms.info/files/committees/bibliographic_standards/committee-docs/RBMS%20RDA%20Editorial%20Group%20Report-200423.pdf.
41. Report of RBMS RDA Editorial Group, April 27, 2020, 1.
42. Creative Commons, Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0), accessed May 26, 2022, <https://creativecommons.org/licenses/by-nc-sa/4.0/>.
43. Google, "What is Programmable Search Engine?" accessed May 9, 2022, <https://developers.google.com/custom-search/>.
44. RBMS RDA Editorial Group, "Citation Numbers," revision 8, last modified December 1, 2021, <https://github.com/rbms-bsc/DCRMR/wiki/Citation-numbers>.

45. RBMS RDA Editorial Group, "Style Sheet (full)," revision 28, last modified March 7, 2022, [https://github.com/rbms-bsc/DCRMR/wiki/Style-sheet-\(full\)](https://github.com/rbms-bsc/DCRMR/wiki/Style-sheet-(full)).
46. RBMS RDA Editorial Group, "Style Sheet (full)."
47. RBMS RDA Editorial Group, "Style Sheet (full)."
48. GitHub, "The Largest Open Source Community in the World," accessed April 29, 2022, <https://github.com/open-source>.
49. Liz Adams and Francis Lapka, "Hosting Options for DCRM2," report presented at the 2019 ALA Midwinter Conference, https://docs.google.com/document/d/1J150DeeDxdFSK_ohC8pfCHWy32D_-iImgFt8cw1-e4g/edit.
50. Society of American Archivists' Technical Subcommittee on Describing Archives: A Content Standard (TS-DACS), "Describing Archives: A Content Standard," version 2021.0.0.2, last modified May 28, 2021, <https://github.com/saa-ts-dacs/dacs/blob/master/dacs.md>.
51. Git for Windows, revision 2.36.0, accessed April 29, 2022, <https://gitforwindows.org/>.
52. Ruby, revision 3.1.2, accessed April 29, 2022, www.ruby-lang.org/en/.
53. Jekyll, revision 4.2.2, accessed April 29, 2022, <https://github.com/jekyll/jekyll>.
54. Minimal Mistakes, revision 4.24.0, accessed May 27, 2022, <https://github.com/mmistakes/minimal-mistakes>.
55. RBMS RDA Editorial Group. "Updating the Jekyll Theme & Customizations," last modified January 26, 2022, <https://github.com/rbms-bsc/DCRMR/wiki/Updating-the-Jekyll-theme-&-customizations>.
56. Don Ho, "Notepad++," revision 8.4, accessed May 27, 2022, <https://notepad-plus-plus.org/>.
57. Anaconda, "Who is Anaconda?" revision 3.9, accessed April 29, 2022, www.anaconda.com/about-us.
58. RBMS RDA Editorial Group, "rbms-bsc/DCRMR GitHub Repository," last modified February 16, 2022, <https://github.com/rbms-bsc/DCRMR/>.
59. RBMS RDA Editorial Group, "Welcome to the DCRM Editorial Guidelines Wiki," last modified March 14, 2022, <https://github.com/rbms-bsc/DCRMR/wiki/>.
60. RBMS RDA Editorial Group, "Issues," last modified October 12, 2021, <https://github.com/rbms-bsc/DCRMR/issues>.
61. RDA Steering Committee, "Frequently Asked Questions."

Book Reviews

Michael Fernandez

Virtual Technical Services: A Handbook. By Mary Beth Weber and Melissa De Fino. Lanham, MD: Rowman & Littlefield, 2022. 166 p. \$45.00 paperback (ISBN 978-1-5381-5263-8); \$90.00 hardback (ISBN 978-1-5381-5262-1).

If you are looking for a book that practically promotes and elegantly advocates for library technical services employees undertaking remote or hybrid work into the future, look no further. Reading Mary Beth Weber and Melissa De Fino's *Virtual Technical Services: A Handbook* brings up a lot of memories and emotions from working as a technical services librarian employed throughout the course of the COVID-19 pandemic and at the epicenter of the 2020 uprisings. However, the scope of the book is much broader than that, touching on past crises (e.g., Hurricane Sandy, 9/11) and preparing for future crises. But as the authors stress throughout the work, lessons learned during this period have value into the future: "We learned that remote work is not necessarily limited to emergencies. Restructuring technical services around remote or hybrid schedules has potential benefits for the future of our work overall" (2). Supervisors and managers organizing and assigning this remote work—as well as technical services workers looking for ways to advocate for themselves, their coworkers, and evolve their workflows to the new mid-pandemic reality—will all benefit from reading this book. The authors examine the history of remote and hybrid work for technical services workers, up until the present day's new staffing models and outsourcing needs. True to its subtitle, this work is intended to be used very much as a "how to." This book is full to the brim with best practices and guidance for library managers in creating and following through with disaster, emergency, continuity of operations, or resumption plans for their technical services departments. The generous bibliography is organized by topic and lists numerous resources for future readers and department leaders to dig into as far as guidance for disaster planning, self-care during crisis, and climate change.

The first chapter highlights creating a departmental virtual work plan including setting up communication channels, meeting staff's remote work technology needs, tracking equipment lent or borrowed, assigning appropriate projects for remote work, and developing a customized risk profile.

The objectives of this chapter speak very much to the handbook's nature. Outlining, creating, and sharing a plan for remote work ideally starts before the remote work takes place.

In the second chapter readers are introduced to best practices regarding organizing, undertaking, and tracking remote work. Weber and De Fino summarize this experience as: "We adapted and thrived. Mistakes were made, but we also learned a great deal and found better ways to do things that were an improvement over how things had previously been done" (43). The authors break down processing physical materials, collection development and acquisitions work, electronic resources workflows, and database cleanup into practical steps that can be undertaken remotely. They also give pointers for creating employee schedules, maintaining productivity, and emphasizing how remote work can make a more sustainable future for technical services as a whole.

The next chapter, "Well-Being," addresses burnout, the self-care needed to treat and prevent burnout, and how our understanding of burnout has changed over the last few years. Weber and De Fino not only define burnout and give recommendations on avoiding it, they also connect back to the numerous literature reviews, original research, and surveys done in libraries on this topic with special emphasis on practical application during unprecedented circumstances for technical services workers. As our hemispheres of work- and home-life became fused together, it became more important than ever to maintain our physical, mental, and emotional health.

Most managers will find this next chapter at the very heart of the matter as it gives a firm basis for remote and hybrid work being incorporated into technical services work in a sustainable and thoughtful way. The fourth chapter is on the management of remote technical services operations and resources for managing remote employees. Topics covered include best practices for video conferencing, communicating and setting performance expectations, check-ins and feedback from remote staff, and how to conduct performance

appraisals and evaluations virtually. This section ends with a robust narrative of returning to work protocols that can be tailored for use at the reader's own library.

As we all know by now, it will never be possible to return to the "old normal," and quite frankly, there are not many of us willing or wanting to do so. The authors now ask that same question: "what happens next and where do we grow from here?" This next chapter looks at resumption of operations and returning to the workplace holistically with an eye towards future extreme weather events or social unrest that could cause damage to library buildings or cause technical services staff to be displaced for long periods of time. The authors lay out preparations for creating and executing a resumption plan with safety precautions, staff safety considerations, respect for employee accommodations in returning to work, calculating departmental occupancy limits, and addressing technology support for returning borrowed equipment.

In conclusion, the book serves as a strong argument and justification for the continuation of remote and hybrid technical services work into the future by examining, taking apart, and dismantling the fallacy that technical services is "stereotypically viewed as an onsite, backroom operation located in some dark and dusty corner of the library staffed by

individuals who have inboxes piled high with print invoices and book trucks jammed with books waiting to be cataloged" (5). If one day in the very far future—and by some miracle—the events of 2020–2022 feel like a dream to us, this book will also serve as a heavy reminder of the realities and incredible challenges we faced to still get resources into our patrons' hands, describe resources with metadata, and preserve our collections during a period when the entire world seemed to be falling to pieces around us. But instead, the authors end on a hopeful note: that what we learned during the 2020–2022 period will serve us well as we adapt to future changes in the world, our communities, our libraries, the information profession at large, technical services work, the adoption of new technologies, and perhaps, how future pandemics might be handled or averted. They conclude, "For many of us, staying home helped us to see harsh realities that had long been ignored" (123). It is this reviewer's dearest hope that we do not forget the lessons of 2020 and continue to be our neighbors' and our coworkers' keeper. May we continue to steward one another's value and well-being just as rigorously as we steward the collections we purchase, describe, and conserve for the future.—*kalan Knudson Davis (kkdavis@umn.edu), University of Minnesota*

The Special Collections Handbook, Third Edition. By Alison Cullingford. London: Facet, 2022. 430 p. \$93.99 paperback (ISBN 978-1-78330-537-7).

Considering how many materials and formats can fall under the rubric of "special collections," it seems like a daunting endeavor to compile a single handbook which covers all their management and care, but Alison Cullingford has done so with great finesse. The book is patently a product of its time: in the introduction the author addresses the impact of the COVID-19 pandemic and how "the rapid digital pivot or shift meant remote access to collections and metadata became more important than ever, for staff and users" (xix). In addition, the "voices for Black Lives Matter" have made the special collections community reexamine practices where "Special Collections have been shaped by legacies of empire, colonialism and slavery" (xix). Throughout the text the impact of this zeitgeist can be seen.

The author has arranged the book into four parts: "Discovering Collections," "Collection Management," "Managing Public Access," and "Governance and Resources for Special Collections." Of all the parts, the first part is most likely the weakest. It is essentially a lightning-quick introduction to the history of the book and book making and then an enumeration of the kind of materials you might also find in a special collection (artists' books, ephemera, audio/visual/digital media, music, maps, and realia). The reader comes away feeling that so little was said about so much. The

chapters in other parts are much stronger, but the part division itself seems a bit arbitrary at times with some overlap of the parts (for example, the marketing chapter in part 3 could easily have gone into part 4 instead).

Nevertheless, the content of each chapter is quite good for the most part with each chapter defining terminology, introducing the major topics of the subject, presenting best practices, and offering up further readings and useful websites at the end of the chapter. In terms of the quality of the content, some chapters are better than others. The chapters on emergency planning, user services, and marketing were very strong. In fact, chapter 9 ("Marketing and Communications in Special Collections") was quite brilliant and offered up insights that can only be garnered through years of experience using social media to effectively promote one's collection. The author rightly and eloquently stresses marketing's importance:

Librarians sometimes worry that marketing will lead to an increase in use, which is a concern if services struggle with existing demand. However, good quality communication means better informed Special Collections users who need less individual attention. Increased use helps librarians acquire funding and

resources; diminishing use and hidden collections leads only to stagnation and threat (225).

Less strong was the chapter dealing with resource descriptions, chapter 5 (“Cataloguing, Description and Metadata in Special Collections”), which does not mention the new RDA Toolkit and what effect that will have on rare book cataloging. Also lacking mention is OCLC’s CONTENTdm. CONTENTdm is used in creating metadata for digital collections—it is mentioned in passing later in chapter 6—but its predominant use in the community warrants more explanation of its application. The small section on music cataloging might as well not have been included. In addition, this chapter’s further reading and useful websites section was inadequate in comparison, say, to the Rare Book School’s *Rare Book Cataloging Advance Reading List*.¹

The first two editions of this book were published in 2011 and 2016, respectively, and were critiqued by contemporary reviewers as being too United Kingdom centric. This third edition seems for the most part to have amended that bias in regard to references to international and American resources, websites, institutions, and tools. To be fair, there is only so much the author can include in the text about other countries’ standards and practices without making the book too lengthy and thereby unwieldy. For example, chapter 7 (“Legal and Ethical Issues in Special Collections”) is almost exclusively focused on UK and US law and this limited focus seems to be the more practical approach since every country is going to have their own laws and practices in terms of copyright, privacy, and freedom of information.

It is a shame, though, that the book was completed while COVID-19 made physical attendance at many research libraries impossible. The gaps in the chapter bibliographies

make this handbook a bit less useful than it could be. It is appreciated that the author admitted as much in the text, stating “I was unable to access some relevant titles due to COVID-19 restrictions. I will share information about them once read via the accompanying website” (23). This is not a fatal flaw, since so much information can be found online nowadays. It is also most likely that there will be room for another edition within five years with the ever-changing world of technology—sections on digitizing, metadata, linked data, etc. will require updating.

To this reviewer, the book will best serve those who are already working in special collections within a specialization, such as a rare book cataloger or reference librarian, who need to broaden their knowledge to other arenas in special collections. The author seems to lean a bit towards thinking that beginners would find it more useful: “The *Handbook* is written for library practitioners who work with Special Collections, or those aspiring to do so, especially library school students and new professionals” (xviii). Yet one might suspect that a new librarian would be overwhelmed by the depth of the content overall. For small special collection libraries or collections where there is limited staffing and therefore less experts to consult, however, this book will certainly be a welcome resource.—*Tamara Fultz (tamara.fultz@metmuseum.org), Thomas J. Watson Library, Metropolitan Museum of Art, New York, New York*

Reference

1. “L-30. Rare Book Cataloging—Advance Reading List,” Rare Book School, <https://rarebookschool.org/courses/library/130/reading-list/>.

Metadata, Third Edition. By Marcia Lei Zeng and Jian Qin. Chicago: ALA Neal-Schuman, 2022. 640 p. \$84.99 softcover (ISBN 978-0-8389-4875-0).

The third edition of Zeng and Qin’s *Metadata*, first published in 2008 and expanded in a second edition in 2016, offers a fully updated overview of the latest developments in metadata standards, practices, and tools, with special attention paid to the areas of linked data, open science, and digital humanities. In this latest revised edition, the authors provide updated links to web resources, discuss the most current versions of relevant metadata standards, survey newly developed standards and best practices, and introduce new advances in semantic web technologies.

For the most part, the book retains the structure and content sequence of the second edition and consists of ten chapters, grouped into five sections: “Fundamentals of Metadata,” “Metadata Vocabulary Building Blocks,” “Metadata Services,” “Metadata Outlook in Research,” and “Metadata

Standards.” Each chapter concludes with a summary, suggested readings for further exploration and study, as well as exercises designed to reinforce and apply introduced concepts and principles. A brief glossary, a comprehensive list of bibliographic references, and a detailed index can be found at the end of the book. A companion website offers a wealth of additional resources, including chapter layouts, suggested readings and exercises from all three editions, appendixes for metadata schemas, application profiles, registries, and content standards, as well as a tutorial on metadata basics aimed at educators, students, and practitioners.

The first three chapters of part 1 introduce key concepts and principles of metadata. They discuss components and specifications of metadata standards such as the Dublin Core Metadata Element Set, the Visual Resources Association

Core Categories (VRA Core), and the Categories for the Description of Works of Art (CDWA), as well as the fundamentals of metadata descriptions, including data conversion and storage. Part 2 surveys metadata models and ontology schemas, such as the IFLA Library Reference Model (LRM), BIBFRAME, and the DBpedia Ontology. It also introduces the concept and purpose of controlled vocabularies and provides a survey of encoding syntaxes.

Chapter 6 of part 3 discusses tools, systems, and policies that provide the necessary infrastructure for metadata service operations. In this edition the authors present a revised section on metadata as linked data, to account for the latest developments of linked data technologies and the emerging challenges of metadata services. Chapter 7 discusses quality issues faced by metadata repositories, and chapter 8 focuses on methods that have been used to achieve interoperability when building digital collections and services. A summative overview of metadata research and developments of the past twenty-five or so years is provided in part 4. Some of the research areas discussed include metadata architecture and interoperability, modeling, and systematic biases in metadata descriptions, workflows, and practices.

Part 5 expands on chapter 2 and introduces an additional selection of metadata standards pertaining to different subject domains and communities, purposely excluding content standards such as Resource Description and Access (RDA) and Describing Archives: A Content Standard (DACS). It includes standards for general purposes, cultural objects and visual resources, research data, archives, rights management,

multimedia objects, preservation and provenance, and metadata describing agents. Several of these sections were updated to reflect latest developments and encoding revisions.

Zeng and Qin—both professors of information science with extensive research expertise and teaching experience in metadata, data modeling, and linked data—have published a welcome and systematic update of an already valuable text. At once a detailed handbook, a well-structured textbook, and a valuable resource guide, the third edition of *Metadata* introduces key concepts and practices in an accessible and logical manner and offers a plethora of didactically useful illustrations and reference resources. The authors give a comprehensive overview of the field of metadata, covering a broad range of complex topics and challenges relevant to libraries, archives, and museums. Their discussions of metadata tools and practices are firmly situated within the broader context of linked data and provide an excellent introduction to the latest developments of semantic web technologies.

This expanded third edition is a substantive book and will be useful reading for information professionals and students who wish to gain a comprehensive overview of the field. It will also be relevant to metadata specialists who require a handy reference handbook and seek to stay current with metadata trends and practices. The companion website will be of particular interest to instructors who teach classes on metadata and information organization as it contains a wealth of additional instructional resources and teaching tools.—*Danijela Matković (danijela.matkovic@yale.edu), Yale University, New Haven, Connecticut*



Core

LEADERSHIP
INFRASTRUCTURE
FUTURES

A DIVISION OF THE AMERICAN LIBRARY ASSOCIATION
225 North Michigan Avenue, Suite 1300, Chicago, IL 60601 □ 312-280-5038
Fax: 312-280-5033 □ Toll Free: 1-800-545-2433 □ <https://www.ala.org/core/>