Editorial: Advocacy for Technical Services

Mary Beth Weber

The term "advocacy," when used in reference to libraries, does not immediately bring to mind technical services. In 2011, I was invited to chair the ALCTS Advocacy Task Force.[1] The task force was created in response to comments made by respondents to the "Reshaping" membership survey,[2] suggesting that advocacy is an area that ALCTS should examine. My colleagues Erin Boyd, Eleanor Cook, Louise Ratliff, and Duncan Stewart also served on the task force. During the course of the task force's work (which included many conference calls, countless email exchanges, and reports from various meetings), I came to realize that there is indeed a need for advocacy for technical services. It can be subtle and on a small scale, and within one's library, institution, or consortium. Or it can be on a larger scale, such as within a professional organization or the profession at large.

The task force hosted a successful e-forum titled "Advocacy: What Does it Mean for Technical Services?" in 2012.[3] A total of 208 messages from fifty-four participants were exchanged during the e-forum, which covered a variety of topics, including how participants defined advocacy and what it meant to them; elevator speeches for technical services; what ALCTS can do for individuals and our profession in terms of advocacy; and critical areas of need that ALCTS can serve through publications and documentation to enable members to meet the needs of their libraries and to facilitate collaborative problem solving.

As I prepared the task force's report, I researched existing advocacy resources within the American Library Association (ALA) and its divisions. ALA provides a wealth of resources, particularly the Office for Library Advocacy (OLA) (www.ala.org/offices/ola) and the Advocacy Clearinghouse (www.ala.org/advocacy/advleg/advocacyuniversity/advclearinghouse). Notably, one of the key action areas of the ALA 2015 Strategic Plan is "Advocacy for Libraries and the Profession: The association actively works to increase public awareness of the crucial value of libraries and librarians, to promote state and national legislation beneficial to libraries and library users, and to supply the resources, training and support networks needed by local advocates seeking to increase support for libraries of all types."[4] ALA divisions that provide advocacy resources for members include the American Association of School Librarians, the Association of College and Research Libraries, the Association of Library Trustees, Advocates, Friends and Foundations, the Association for Library Service to Children, the Library Information and Technology Association, the Public Library Association, and the Young Adult Library Services Association. It seems that technical services librarians often do not think of advocating for their work. The task force proposed the idea of "backroom advocacy," which takes place at one's job, institution and community, and involves advocating for the work of technical services, not for a particular type of library or aspect of technical services. Certain aspects of technical services (collection development and management, for example) have a public component and have greater interaction with other parts of the

library and user community. Catalogers sometimes interact with the public when there is a major culture change, such as *RDA* implementation. While all of the technical services areas represented by ALCTS affect our institutions' ability to provide services to our respective user communities, technical services librarians may lack mechanisms to advocate for their contributions. This in turn diminishes our ability to attract new librarians to the work we do and to ALCTS, and ultimately may be detrimental to technical services as a career path.

I attended the ALCTS Board of Directors meeting during the 2012 ALA Annual Conference to discuss the task force's report. Two groups have been formed as the result of recommendations set forth in our report:
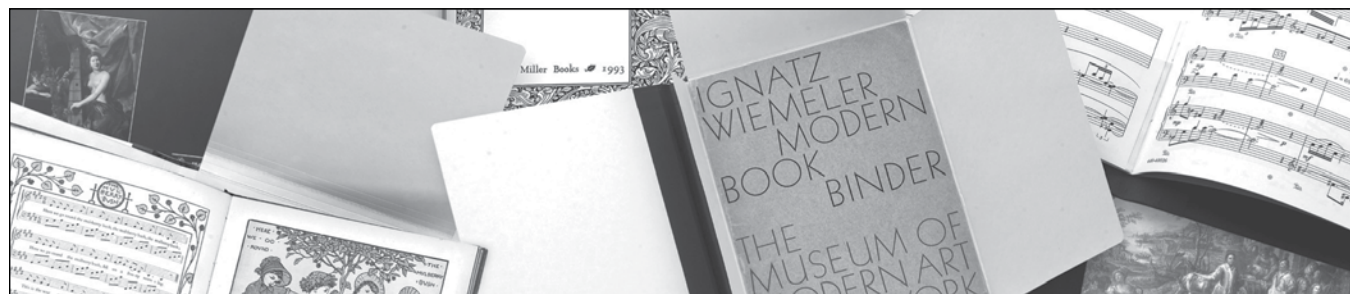
- The ALCTS Technical Services Advocacy Resources Task Force, chaired by Louise Ratliff. This group is charged with assembling "a collection of resources, available through our website, to help ALCTS members demonstrate and articulate the value of functions in ALCTS' areas of coverage, historically known as technical services."[5]
- The ALCTS Advocacy Coordinating Group, a new division-level committee, which will be chaired by

Olivia M. A. Madison. Eleanor Cook and Duncan Stewart will serve as ex officio members. The goal is for the committee to "enable ALCTS to play an effective role in policy development, and bring our members' expertise to many pertinent policy discussions, for the benefit of library service."[6]

I am very excited about both of these groups, and it has been rewarding to see the positive affects of the Advocacy Task Force's recommendations. My experience has transformed my views on advocacy and has convinced me that there is indeed a strong need for technical services advocacy.

LRTS advocates for technical services by providing scholarly papers on current topics that are relevant to the needs and concerns of our profession. It provides a vehicle for technical services librarians to share information that will benefit their colleagues and provides resources such as book reviews as a professional courtesy to others. I have shared *LRTS* articles with nontechnical services librarians and administrators at my institution to provide timely and relevant professional information to them.

In closing, I would like to draw your attention to the papers in this issue of *LRTS*:

- Sarah Sutton provides a review of the serials literature, 2010–11.
- Paul Moeller provides a review of the acquisitions literature, 2010–11.
- John Baga, Lona Hoover, and Robert E. Wolverton Jr. have written an annotated webliography of online, practical, and free cataloging resources. This is a new type of publication for *LRTS* that will greatly benefit catalogers.
- Jennifer Bazeley and Becky Yoose have written a Notes on Operations paper on using a LibGuide to communicate between technical services and public services at Miami (Ohio) University Libraries, which is an example of technical services advocacy.

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6. Carolynne Myall, "ALCTS Advocacy Coordinating Group," email to ALCTS Leaders discussion list, December 10, 2012.

Flexibility in the Face of Change

A Review of the Serials Literature, 2010–11

Sarah W. Sutton

The serials literature for 2010–11 reflects the need for all members of the serials information chain to demonstrate flexibility in the face of constant change. Both the current economic context and the rapid development of technology are providing users with more options than ever before for fulfilling their information needs. The literature reflects this and the actions that members of the serials information chain are taking to evaluate, measure, and deliver serials content in new and creative ways. The major themes in the serials literature—workflows and processes, access to serials, metrics, and changing user behavior—are described and illustrated using examples from a selection of materials published during 2010–11.

T he serials literature for 2010–11 reflects an evolution of the serials information chain that librarians on the front lines will immediately recognize. The serials information chain comprises "serials librarians, serials publishers, subscription agents, representatives of bibliographic utilities, and library science educators—in short, all parties interested in serials."[1] Stringent economic conditions are forcing libraries to assess and reassess the value of every dollar spent on collections. The technologies through which libraries deliver the content of serials collections have advanced rapidly. The combination of these occurrences has created an atmosphere of change and evolution. Users are conveying their desire for content and content delivery through word and action, and every member of the serials information chain from librarians to publishers to vendors to agents are working in collaboration to understand these needs, to develop systems and processes to respond to them, to measure them, and to anticipate what they will be in the years to come.

The author compiled, selected, and analyzed the literature for this review using qualitative research methods with the assistance of a graduate research assistant (GRA). The author and the GRA identified an initial group of 419 articles published in the 2010 and 2011 volumes of three core serials journals: *The Serials Librarian*, *Serials Review*, and *Serials*. The author and the GRA used these sources to identify key words that they then used for a broader literature search in the databases *Library, Information Science and Technology Abstracts with Full Text*, and *Library and Information Science Abstracts*. The author and the GRA identified additional materials via citations to and within the initial article collection as well as from the archives of SERIALST, "an informal electronic

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forum for most aspects of serials processing in libraries."[2] The final pool of documents contained 598 items. In addition to appearing in these sources, criteria for selection at this stage were broad, consisting of language (English) and publication date (2010 or 2011).

The author and the GRA read article abstracts and, in many cases, the articles themselves, making notes on content and suitability for inclusion in the review. The author loaded these citations, abstracts, and notes into NVivo 9 (a qualitative data analysis software) and read and annotated any unread items. She inserted her additional notes into NVivo 9, then reviewed the data again, this time for the purpose of identifying topical patterns and themes (NVivo calls them nodes). The author coded (i.e., identified with) each summary, abstract, and note at one or more thematic nodes. The author reviewed the resulting list of thematic nodes for content. She selected thematic nodes for inclusion in this literature review on the basis of a combination of coverage in the literature and relevance to members of the serials information chain. Finally, the author reviewed the material coded at each thematic node to further develop definitions of and ideas about the themes they represented. The breadth of the serials literature precludes the inclusion of all of the topical nodes in this review. Nodes that were excluded are journal content licensing and copyright, journal access content standards, serials selection, and open access.

Two overarching themes and four more specific themes emerged from the analysis and coding process. The overarching themes are the economic constraints facing libraries and their serials collections and the shift from print to online formats for the delivery of serial content. The overarching themes are prevalent enough in the literature to warrant separate discussion, although they are interwoven in all of the more specific themes. The four more specific themes are serials workflows and processes, access to serials content, metrics for decision support, and changing user behavior. Descriptions and discussion of these themes make up the rest of this review.

Economic Constraints Facing Libraries and Their Serials Collections

The discussion of decreasing budgets pervaded the literature in 2010–11 as it has for years.[3] The overarching theme of economic constraints in the current literature has the following facets:

- strategies for maintaining service during steep cuts to the serials budget and maximizing serials access
- the continuing transition to online formats
- institutional budget reorganization to increase available funds for serials

Zappen and Throumoulos recommend a strategy of combined activities.[4] Those activities are collaborating with faculty before making decisions on cancelations or transition to new formats and presenting institutional administrators with data describing the affect of cuts. Zappen recommends "tracking the price inflation of serials, monitoring its impact on the materials budgets and library collections."[5] She advocates valuing access over ownership when transitioning to online formats while Throumoulos suggests heavier reliance on document delivery (both interlibrary loan and pay-per-view).

Strategies for freeing additional resources for serials and e-resources management as a reaction to economic constraints are wide ranging. Zappen reports that ceasing service as a federal documents repository has freed resources for other priorities.[6] Busby points out that hidden costs, such as staff time and effort to process and maintain serials, must be weighed against the benefits of consortial purchases like lower subscription costs and shared negotiations.[7] The serials world seems to be on the fence regarding both consortial and Big Deal purchases. Big Deal purchases are agreements between a publisher and a library or group of libraries under which the library agrees to pay a premium on the cost of their existing subscriptions (perhaps 10 or 15 percent) being provided with electronic access to all of the publisher's publications in return. Several of Powell's strategies reflect a move away from consortial purchase including renegotiating multiyear Big Deals or cancelling them and subscribing to journals individually.[8] According to Powell, these types of decisions should be metrics-based (usage, faculty recommendations, historical price increases, and local ratings).

Additional strategies for dealing with economic constraints found in the literature include discontinuing the practice of "convenience" replication (e.g., course packs created from library owned materials), seeking open access (OA) content, consolidating subscription vendors, negotiating for lower fees, and consolidating access and management software services (e.g., link resolvers, A-to-Z journal lists, discovery, federated search, electronic resource management systems (ERMS)). Zappen, Powell, and Riggio, Tijerina, and Cook also recommend reducing duplication across formats.[9]

Shift from Print to Online Formats for the Delivery of Serial Content

Many of the articles representing the second overarching theme in the literature, the shift from print to online formats, discuss the causes of the shift. The impetus for the shift that is apparent in the current literature involves libraries' reaction to rapid technological change and the economic climate that has resulted in mandated budget cuts. The

literature also reflects the obstacles and barriers that members of the serials information chain are facing and working creatively to overcome.

Henderson and Bosch identify one root cause of the shift when they note "the tightening economy has accelerated the already rapid move from print journals to online-only to widen access while containing cost."[10] Spagnolo, Pennington, and Carter note other causes of the shift.[11] The report that most libraries have reduced the number of their print subscriptions in favor of online subscriptions either as a reaction to changing patron need and desire or to reduce staffing resources required to process print. By reducing or eliminating check-in, claiming, binding, ceasing to place security strips in issues that will be bound, binding incomplete issues, ceasing comprehensive title-level invoice checking in favor of spot checking high risk and use titles, libraries save staff time and, in some cases, can redirect these savings to managing online resources. Spagnolo, Pennington, and Carter observe "decision-making [of this kind] is based as much as possible on physical criteria and anticipated use rather than past practice or tradition."[12]

The shift to electronic formats has been incorporated into collection policies with reasonable exceptions that include faculty needs and desires for print and instances where the library has a heavy responsibility for archiving or preserving specific content.[13] The shift is spurred by increasing reliability of stable archives (e.g., Portico and JSTOR) and sometimes involves Big Deal contracts for online journal content and the implementation of serials and access management tools such as link resolvers, discovery tools, and ERMs.

The other major theme is the obstacles and barriers to making the switch. Sullenger's case study of the Auburn University Libraries' serials format inventory project illustrates this well.[14] She discusses the local constituents' desire to keep print format and the unacceptable (to the library) conditions placed on electronic access by publishers. These unacceptable conditions include publishers who make access to online content available to individuals but not to institutions, deliver online content via email, or limit access to online content to use on a dedicated terminal in the library or to a maximum number of simultaneous users. Other examples of unacceptable conditions include access to online content that can only be controlled by username and password (rather than providing authentication via IP address), the vendor's online interface is awkward to use, and the price for institutional subscriptions is too high.

Both the economic constraints under which libraries are operating and the shift from print to online content are reflected in the four topical themes that comprise the rest of this review. Workflows and processes are changing not only to meet users' desire for online content but also to improve efficiency and maximize shrinking budgets. Access to serials content online to meet user demand also has provided members of the serials information chain with opportunities for increasing efficiencies. Libraries are using metrics, such as usage statistics, to measure the effectiveness of funds spent and support decision making related to the shift from print to online. User behavior is both a reflection of rapid change and a driver of it.

Serials Workflows and Processes

Much of the literature related to the shift from print to online is coded at the workflows and processes thematic node, most likely because changing formats has spurred the need to change workflows and processes. Many of the articles coded at the shift from print to online node discuss the reasons for the shift, and those coded at the workflows and processes node discuss what to do about it.

Within the theme of workflows and processes, the most prominent topic is reaction to rapid change and a resulting emphasis on patron-focused services. Reduced budgets and rapidly changing technology have forced libraries to realize that they cannot be everything to all people but must focus on their primary local constituencies' needs. Sometimes this has meant changing or even eliminating workflows and processes that are deemed of lower priority in meeting patron needs (for example, serials check-in).[15] Blackburn and Lowden address this change when they say that libraries need to "focus their efforts on what their target audience specifically needs."[16]

The literature contains discussions of how to change workflows, particularly with regard to serials management and developing new systems (both in terms of processes and software) that will accommodate rapid change and a move to greater patron focus. Chamberlain reports a comment on the duration of workflows made by an OCLC product analyst: "we are past the day where there is a workflow and that is how it needs to be done for the next ten years. I do not think we can guarantee that even for two years."[17] Instead of developing systems and workflows to meet specific existing or even predicted needs, libraries should be designing systems and workflows with enough flexibility to accommodate rapidly changing serials management models.

Tbaishat presents a case study of two libraries' acquisitions workflows that focus on the use of role activity diagrams (a business-process modeling technique) to illustrate the differences between the two libraries (one in the United Kingdom and one in Jordan).[18] This case study is particularly interesting because it suggests that libraries might benefit from adapting systems analysis and modeling techniques from other industries. The adaptation of techniques used in nonlibrary settings is an opportunity to continue along the path of maximizing resources.

Another topic in the literature is the need for increased interoperability between software systems. One example is the development of the CUFTS reSearcher suite of tools done at Simon Fraser University and the University of Prince Edward Island and reported by Taylore, Dodd, and Murphy.[19] Not only would increased interoperability increase the level of flexibility, it would also serve the goal of maximizing limited resources. Blackburn and Lowden report on research done by OCLC to understand "new user needs and how they might be combined into a single, integrated, serial and electronic product workflow."[20] On the basis of this research, they recommend that acquisitions librarians "focus their efforts on what their target audience specifically needs."[21] They make several recommendations for future development of serial acquisitions software. Serials acquisitions software needs to have "maximum interoperability with other systems within their libraries" and "flexibility to work within the library's current practices."[22] Libraries also need "a single place" to assess current and potential subscriptions at annual renewal time as well as a system that would allow them to "act on this evaluation."[23]

The libraries (University of California–Davis, University of Missouri–Kansas City, and University of Alberta) described by Spagnolo, Pennington, and Carter have reorganized technical services (including serials) by centralizing processing in cases of multiple libraries, organizing units on the basis of function instead of format, and cross-training staff to handle multiple responsibilities.[24] Centralized processing in this case took the form of a single acquisitions department that accomplished purchasing for all branch libraries. Cross-training "has provided us [the University of California at Davis within the University of California System] with an ability to maneuver in response to fluctuating needs and different cycles between monographs and serials."[25] This reflects growing flexibility in the face of change on the libraries described.

It is noteworthy that the articles coded at the serials workflows and processes node, with one exception, deal with changes to library workflows and not workflows in other areas of the serial information chain. Fritsch and Lee offer the exception.[26] These authors describe a new collaboration between the University of California Press (UCP) and JSTOR to make current nonprofit publishers' journal issues available on a stable, robust platform. This new collaboration is based on an existing relationship between JSTOR and UCP. JSTOR has hosted UCP's back files for many years. This collaboration has resulted in a system that both preserves scholarly journal content and delivers it to users. This approach relieves the mounting financial burdens of keeping pace with technological developments faced by small, nonprofit publishers and provides sales and customer service support to the UCP. Benefits to libraries include the use of exiting JSTOR licenses, which means that libraries that have a JSTOR license do not have to negotiate new licenses with each small press publisher. Libraries will have improved usage metrics that strengthen "a library's ability to gather usage statistics for evidence-based collection management."[27] Digital preservation is another benefit for libraries. Benefits for journal users include strengthening the JSTOR platform as a discovery tool through the addition of current content, "seamless access to full runs of journals," reduced interface downtime, and the ability to keep pace with user needs by keeping pace "with changes in technology and pedagogy."[28]

Schonfeld reports on Ithaka's project to develop a "What to Withdraw Framework," a decision support tool for libraries to use when deciding to cancel or withdraw print collections in favor of online versions of scholarly journals.[29] Ithaka based this tool on the results of their 2009 faculty survey, which indicated that increasing numbers of faculty in all disciplines have become comfortable with relying on local journal collections in electronic formats. However, Housewright, in reported on the 2009 faculty survey, noted that faculty ranked the role of the library as an archive of important materials as the second most important of five roles, implying that faculty still views one of the roles of the library to be preservation of the scholarly record.[30]

Subscription Management

A challenge faced in subscription management is changing workflows and processes. The literature reflects two primary themes: providing consistent access and the need for libraries, publishers, and subscription agents to agree on holdings at the journal title level, and the actual acquisitions process.

Blake and Collins present a thorough analysis of the issues related to the need for libraries, publishers, and subscription agents to agree on holdings at the journal title level to provide consistent access.[31] They describe several solutions in use at academic libraries: EBSCO's Rapid Renewal Tool, publisher's electronic holdings reports, Web 2.0 tools to document individual institution's management decisions, and data from a proprietary knowledge base (e.g., SFX). Blake and Collins also present three approaches to manage e-holdings used by the librarians they interviewed: highly managed, service-reliant management, and combined approaches. The highly managed approach consists of activating, testing access, and verifying holdings for each individual journal title one by one. The advantage of this approach is a high rate of accuracy in holdings displays. The disadvantage is the large amount of time it requires. The service-reliant approach consists of accepting the holdings information supplied by vendors via the library's link resolver knowledge base. The advantage of this approach is time-savings, which allows libraries to make holdings available to their patrons more quickly. The disadvantages

are occasional discrepancies between the holdings identified in a library's contract with a publisher and the holdings displayed in the knowledge base. The combined approach involves taking the highly managed approach for unique collections while taking the service-reliant approach for managing package title lists. The authors conclude with trends they see in e-holdings management: an increase in tools used to manage e-holdings and a continued need for interoperability between systems.

The second theme, changes to acquisitions processes, is represented in two articles from Europe. Tjensvoll writes about the benefits of the acquisitions process (a form of the Big Deal) used by the Norwegian Electronic Health Library.[32] He extols the advantages to citizens of Norway of a bid-based purchasing model for materials added to the Norwegian Electronic Health Library, specifically, the public availability of BMJ Best Practice and UpToDate, which resulted from use of the model. Best Practice and UpToDate are research databases designed to deliver evidence-based research to healthcare professionals in their workplace via mobile devices.[33] Earney offers a partial response to and personal reflection on Tjensvoll's article.[34] Earney questions whether a call for bids is an appropriate way to license unique electronic resources and suggests that direct negotiations between vendor and subscriber would result in greater cost savings to the public.

Integrated Library Systems and Open-Source Software

A relationship exists between integrated library system (ILS) and subscription management workflows. Although not covered in previous serials literature reviews, the use of the ILS as both a means of managing subscriptions and providing access to serials was a strong enough theme in the 2010–11 serials literature to warrant mention. The articles coded at the ILS and open-source software thematic node (see appendix) suggest that libraries are looking for a system that will provide a single format-neutral place to efficiently gather, store, and analyze all the data related to serials management, and allow using that same data to improve access to serials. The ILS has the potential (although not yet realized) to serve this purpose.

The ILS also is a topic of interest in relation to the move libraries are making toward integrating print and online holdings data into a single source. Many libraries are turning to open-source ILS software for a solution. For instance, Liu and Zheng report success with a project at the University of Windsor Leddy Library to combine the display of their print and online holdings by integrating data from their open-source ILS, Evergreen.[35] Blackburn and Lowden report on research done by OCLC "to understand . . . new user needs and how they might be combined into a single, integrated, serial and electronic product workflow."[36]

Based on this research, they recommend that acquisitions librarians "focus their efforts on what their target audience specifically needs."[37] They make several recommendations for serial acquisitions software. It needs to have "maximum interoperability with other systems within their libraries" and "flexibility to work within the library's current practices."[38] Libraries also need "a single place" to assess current and potential subscriptions at annual renewal time as well as a system that would allow them to "act on their evaluation."[39]

The use of open-source software is one means of facilitating access to both print and online serials because, as Liu and Sheng report, integrating print journal holdings data from an open-source ILS with data from an OpenURL link resolver can create a comprehensive, format-agnostic A-to-Z list of a library's journals holdings.[40] Taylor, Dodd, and Murphy describe the collaborative creation of an open-source ERMS.[41] Johnson offers the opinion that interest and work on open-source ILS will increase.[42] Chad portrays the benefits and disadvantages of open source.[43] The benefits, according to Chad, include making data more widely available that will, in turn, enhance and encourage innovation, return control of the system of scholarly communications to the scholars, and support software development that meets the needs of higher education. Chad identifies the greatest challenge of open source as creating applications that have a broad appeal in terms of reusability. Another perspective on open source is offered in a report of a panel discussion between the executive director of Kuali OLE (an open library environment), a project analyst at OCLC, and a senior project manager with Innovative Interfaces, held at the 2010 annual meeting of the NASIG.[44] One topic of their discussion was the integration of open-source serials management tools and ILSs.

Access to Serials Content

Thematic issues related to access to serials (derived from the references coded at "access to serials") include the need for increased and improved communication between members of the serials information chain, the increasing use of diverse platforms for content access, the changing behavior of users, how those changes are the impetus for changes in delivery platforms and interface design, and the provision of access points through the use of metadata.

A lack of communication between publishers, subscription agents, and libraries results in a loss of access to e-journals at renewal time, loss of back files (when the publisher changes their business or access model), and lack of knowledge of "what period of access we are supposed to have for each of our electronic titles."[45] Pearson and Box suggest that publishers should "not only collaborate with libraries to drive usage but to share the data that they collect

such as usage half-life and path analysis."[46]

The delivery of journal content to mobile devices is the topic of growing number articles. Many deal with how libraries might best accomplish delivery of content to mobile devices and some relate to "shifting patterns of media consumption."[47] White, Anderson and Dresselhaus, and Evans all suggest that to accomplish delivery of journal content to mobile devices, libraries and publishers must work together to understand the expectations of users for mobile journal content access.[48] Picco, Cohn, and Rosenblatt of Atypon, "a leading provider of software to the professional and scholarly publishing industry" and publisher of the Literatum platform, report on a project begun in 2010 to deliver content to mobile devices.[49] The report suggests three strategies for the delivery of content to mobile devices: first, ensuring that delivery is available to all types of mobile devices; second, providing support for authentication; and third, limiting the density of content per page because screens are smaller and dense information on touchscreens is particularly difficult to navigate. Sheail observes that, for students in online-only learning environments, the library is equivalent to its web interfaces, both mobile and otherwise, and predicts a continued shift toward the consumption of electronic journal content.[50]

Related to the growing use of mobile devices to access journal content among library patrons is the topic of user search behavior. The use of mobile devices represents one of several new behaviors that are being taken into account in the design of access points for e-serials. In his 2010 paper describing a serials cancellation project, Matlak suggests that the way in which users are browsing and using the web for their research is defining what kind of research they are using.[51] Article database usability studies support this conclusion. Fry reports the results of a usability study of college undergraduate students that determined that students tend to use web-based search interfaces with which they are familiar.[52] The literature includes some discussion of web and interface design and the incorporation of Web 2.0 tools to deliver journal content to users. One aspect of this is the use of mash-ups to create new services and applications.[53] Beccaria, Tennant, and Traub describe OCLC's xISSN web service, an application program interface (API), enables libraries to retrieve serials metadata from WorldCat in parsable form that, in turn, allows libraries to enhance their local catalogs by combining the metadata with local holdings information.[54] Lie and Zheng describe how libraries are beginning to present users with a single multiformat serials display.[55] Matlak notes that multiformat serials displays have the advantage of providing easy access to print and electronic journals and increasing journal usage.[56] Wisniewski suggests that multiformat displays have the potential to present users with a single search box that searches the entire print and electronic collections.[57]

Mercer and Dyas-Correia point to the central importance of metadata to the scholarly communication lifecycle, of which serials access is an integral part.[58] In their article, the authors present "a case for finding global solutions to improve the metadata that are available for journals, particularly small, independent, open-access journals."[59] They provide examples of the importance of metadata to the discovery, access, and use of publications and offer suggestions for how librarians can partner with editors and publishers to enhance discoverability and usability for patrons. For instance, the authors suggest that librarians can take an increased role in publishing by creating repositories, educate editors and publishers on how to obtain ISSNs and Digital Object Identifiers (DOIs), assist journal publishers to understand the implications of title and format changes, and help editors and authors understand OA policies.

Although the implementation of *Resource Description and Access: RDA* for serials cataloging was discussed in the serials literature, the author found little evidence during the review period of its adoption or of the consequences for users.[60] Two conference presentations on serials cataloging at the 2010 annual NASIG meeting discuss new MARC coding developments and a report on further testing of *RDA*. Hawkins, Nguyen, and Tarango introduce the 588 MARC field (Source of description note), which was introduced to support CONSER testing of RDA.[61] El-Sherbini describes the changes serials catalogers will face with the implementation of *RDA* including the elimination of abbreviations and the identification of relationships between manifestations of a single work and additional descriptive MARC fields (336 (Content type), 337 (Media type), and 338 (Carrier type)) for electronic journals.[62]

Several researchers studied the way libraries are making OA publications available to their patrons. Collins and Walters look at how liberal arts colleges make use of OA journals on the assumption that "students and scholars can take full advantage of OA journals only if libraries make them available through mechanisms that are familiar to patrons."[63] Publishers and interface vendors appear to have taken this to heart. Looking for alternative income streams, large publishers "continue to cherry-pick the most successful OA journals and add them to their packages (at a price)."[64]

Metrics and Decision Support

The literature reflects the need for reliable usage data and other metrics. This likely stems from the ongoing need to inform cancellation projects. Several articles report on the creation of decision support systems (DSS) created to compile data relevant to actions (e.g., acquisition and cancellation) related to serials subscriptions. Nixon describes a homegrown decision support system created by the Purdue

University Libraries that allowed librarians to gather and manipulate together data from a variety of disparate sources including their ILS, their link resolver, and the Institute for Scientific Information (ISI).[65] The reports produced by their system allowed them to identify specific criteria that they would share with faculty members to build consensus for subscription cancellations. Carroll and Cummings describe a similar system that was developed at Washington State University (WSU) and integrated data from an ILS, an ERMS, Project COUNTER, subscription agent knowledge bases, interlibrary loan software, and citation databases—all of which were loaded into an Excel spreadsheet.[66] The WSU DSS is used not only to support cancellation decisions but also to support journal selection and analysis of vendor and aggregator package agreements.

Most articles coded at the metrics and decision support node identify the need to create and use usage data and DSSs, which are often necessary to respond to mandates placed on libraries by the institutions that they serve to either provide data that describe the return on investment for the dollars spent by the institution or in response to calls for budget cuts or both. Some authors question the concept of use that underlies the drive to quantify and measure journal use. Fleming-May suggests that "the concept of 'use,' however, is complex and must be fully understood for meaningful incorporation into assessment measures."[67] Matlak suggests that "usage is being driven by the style of research that the Internet encourages."[68] Pearson and Box suggest that the context in which usage data are obtained, e.g., "the path taken by users to obtain journal articles," could inform collection development decisions.[69] Henderson and Bosch note that

when use becomes a key part of the value proposition, it can lead to commoditization of library resources. Content that is used is "good" irrespective of [its] quality. Much of the content in the scholarly and cultural record may not appeal to popular tastes or merely reflects the current hot topics in scholarly discourse. Libraries will have to make hard decisions to meet current user demands and to preserve quality information that doesn't see significant use in the short term.[70]

Changing User Behavior

An interesting theme in the serials literature examines the results that changing user behavior is having on the collection of and provision of access to serials. Matlak starts with the premise that usage statistics are the benchmark for deciding how to manage collections.[71] He then argues that usage statistics lack context because they describe what is being used but do not reveal what drives usage. He concludes that what drives usage is user search behavior.

The way in which users are browsing defines what kind of research they are using rather than the quality of an article, that is, they use what is visible and convenient. White suggests that, as mobile devices become "the default access devise to a work of information and applications" and that "understanding the expectations of these users will be of paramount importance in providing profitable value added services."[72] Picco, Cohn, and Rosenblatt also suggest that mobile technology is becoming the access device of choice for researchers and scholars.[73]

Another perspective is presented by Fry who analyzes what libraries can do to help users access their databases by enhancing their utility for patrons and thereby increase use.[74] Fry's suggestions include recommending new databases to students that share a common interface with databases with which students are familiar, asking proprietary ERMS vendors to provide flexibility that allows libraries to create student-friendly discovery pages, and making use of web-scale discovery systems. Padley presents HTML5 (the fifth edition of HyperText Markup Language) as a solution to the problem of publishers' needing to support multiple platforms for delivery of content to mobile devices.[75] Rapple reports on *Annual Reviews'* experience developing a strategy for making its journal content accessible via mobile devices.[76] Evans suggests that the move to mobile devices for scholarly content exploration is a shift in the pattern of media consumption.[77]

The literature reviewed in this section suggests that usage is driven by shifting patterns of media consumption (e.g., the mobile device now, possible something else later) and that part of that shift is away from judgments of quality in media consumption and toward user convenience. Henderson and Bosch say "when use becomes a key part of the value proposition, it can lead to commoditization of library resources. Content that is used is 'good' irrespective of quality. Libraries will have to make hard decisions both to meet current user demands and to preserve the quality information that doesn't see significant use in the short term."[78]

Conclusion

The key themes that emerge from the 2010–11 serials literature are economic stringency; an increasing shift from print to online formats; workflows and process that address the transition from print to online, subscription management, and integrated library systems that facilitate serials work; access to serials content; metrics for decision making; and changing user behavior. These themes reflect the need for flexible solutions to the challenges of the current information society and those that are to come.

The bottom line is that libraries can no longer afford to be all things to all patrons. Limited resources require

libraries to prioritize what they do by creating workflows that focus their work on providing the materials and content that are most needed and desired by their specific patron base and by creating workflows flexible enough to change as those needs and desires change.

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Appendix. List of Themes

Theme	Subtheme
Access vs. ownership	
Access to serials	Authentication
Aggregations	
Assessing journal value	Usage stats
Big Deal	
Budgets—see Economic constraints	
Cancellation projects	
Cataloging	Metadata
Change	
Check-in and checking online access	
Closed stacks	
Cloud computing	
Collection development	
Consortia	
E-books	
Economic constraints	
Globalization	
Integrated Library Systems	
Interoperability	
Licensing	
Link resolvers	
Management tools	ERM; Excel; Mash ups
Metrics	
Open Access	
Open-source software	
OpenURL	
Outsourcing	
Perpetual access	
Predictions for the future	
Preservation	
Programming (computer)	
Publishers	
Publishing models	
Results of rising prices	
Return on Investment	
Role of the library	
Scholarship and scholarly communication	
Serials pricing	
Shift from print to online	
Shifting patterns of media consumption	
Standards	
Subscription agents	
Subscriptions and renewals	
training	
User needs	
User search behavior	
Web-scale discovery	
Work devoted to current print issues	
Work flows and processes	Check-in and checking access

Literature of Acquisitions in Review, 2010–11

Paul D. Moeller

This review covers the literature of acquisitions from 2010 through 2011. This period was punctuated by continuing economic challenge, and the themes expressed in the literature are largely related to this situation. Libraries moved with conviction toward patron-driven acquisitions. The reexamination of the Big Deal persisted as libraries felt the strain of budget cuts. Approval plans continued to evolve and e-books steadily increased market share. Workflows and management tools became more sophisticated as librarians and vendors sought to cope efficiently with the influx of electronic resources.

This review of acquisitions literature is a continuation of the literature reviews conducted by Dunham and Davis for the years 1996–2003 and 2004–7, and by Harrel for 2008–9, published in *Library Resources and Technical Services*.[1] The challenges brought forth by the Internet and technological change were a major focus of the 1996–2003 review. In the 2004–7 review, prominent topics included budget concerns and the management of electronic resources. These topics continued to be a concern for the 2008–9 review as were approval plans, creating workflows, the Big Deal (the acquisition of large collections of electronic resources from individual publishers that usually include all-inclusive title lists with agreed-upon limits to price increases), the changing landscape of the marketplace, and the increasing prevalence of e-books. For 2010–11, tight budgets influenced much of the conversation. The Big Deal faced continued scrutiny. The challenges of managing e-resources led to the refinement of workflows and tools. Approval plans continued to evolve and open access publishing gained increasing momentum. Electronic books became a hit with the public and libraries alike and patron-driven acquisitions was widely discussed in the literature.

Research Method

In identifying the significant literature published in 2010 and 2011, the author searched Library and Information Science Abstracts (LISA); Library, Information Science & Technology Abstracts with Full Text (LISTA); and ISI Web of Knowledge for appropriate works. Using "acquisitions" and "library" as keywords and limiting by date of publication and scholarly journal, LISA returned 555 results and LISTA returned 547 results. With a similar search, ISI Web

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of Knowledge returned 221 results. The author consulted WorldCat to find monographs focused on the topic. Finally, the author conducted a systematic review of the contents of selected library science journals. Most items considered for this paper were peer-reviewed articles from scholarly journals published in English, but books, proceedings, and reports also were considered. Works on serials largely were excluded because they are covered in serials and continuing resources literature reviews. The author selected items for this literature review that were indicative of prominent themes in the literature.

The literature published in 2010 and 2011 spans various topics. For convenience, the author has organized the review into four categories (library acquisitions services, tools and resources used in acquisitions work, purchasing models, and open access). Some categories have subsections.

Library Acquisitions Services

In summarizing the findings of a survey of Association of Research Libraries' (ARL) budgets, Lowry found that

> member libraries have experienced three unprecedented years of flat or reduced budgets beginning with FY 2008–09, when 55 percent indicated reduced budgets. In FY 2009–10 that trend continued, with 61 percent experiencing flat or reduce budgets from the prior year. For this year, 2010–11, 47 percent are faced with flat or reduced budgets. As observed earlier, this is the new norm and not an aberration. It will have consequences for teaching and research within higher education and in the market place of scholarly communications internationally.[2]

The economic downturn hit public libraries as well. According to Kelley,

> the overall trend in FY10 was a brutal grasping by money-starved government officials for the low-hanging fruit of library budgets: 72 percent of survey respondents said their budget had been cut, and 43 percent had staff cuts. Among libraries serving populations above one million, these figures were even more acute, with 86 percent reporting budget cuts in their libraries and 93 percent reducing staff. They also reported a drop in service hours that on average equaled two branch closings.[3]

This challenging budget situation and the increase in electronic resources managed by libraries have had a continuing impact on the work of acquisitions. Attempts to manage resources more effectively and efficiently are reflected in the literature. In recent years, a number of new library positions have been created to take on responsibilities associated with managing electronic resources. Electronic resources librarians, licensing librarians, and digital collections librarians are normally responsible for acquiring electronic resources, troubleshooting access issues, and training users of the resources. Pomerantz, in an attempt to clarify whether a consensus exists on what aspects of electronic resources management are acquisitions responsibilities, developed a survey investigating the role of acquisitions librarians in electronic resources management.[4] The survey results showed a significant amount of variation in responsibilities and practices. Respondents reported having from sole to widely shared responsibility for negotiations, licensing, registration, activation, and maintenance. While Pomerantz claimed no consensus for the role of the acquisitions librarian in managing electronic resources, the survey revealed perceived needs for additional training, more collaboration between departments, the development of best practices for acquisitions of electronic resources, and the need for individuals to take the initiative to learn new skills.

Traditional print workflows also were studied closely in an effort to find even marginal cost savings. Schroeder and Howland conducted a time-task study to determine the cost and processing time for shelf-ready and non-shelf-ready books.[5] They conducted this study intending to find out if they should expand the acquisition of shelf-ready books. To determine the cost of cataloging and physically processing print books at the item level, they used slips placed in books on which staff noted the date and amount of time they spent working on an item and when they sent it on to the next step in processing. This process was used for shelf-ready books, partially shelf-ready books, and non-shelf-ready books, and the books were tracked until they were in the stacks ready for patron use. The study showed that shelf-ready books were 5.7 percent cheaper to process than non-shelf-ready books. Furthermore, the shelf-ready books made it to the shelves thirty-three days sooner and required 47 percent less processing time than books processed in-house.

Stouthuysen and colleagues discussed how "time-driven activity-based costing" (TDABC) can be used to develop cost models for acquisition processes.[6] In their study, they worked with print materials and considered ordering, receiving, paying, and using the integrated library system (ILS) and online vendor databases in an acquisitions workflow. The authors reviewed the theoretical background of TDABC and employed this technique to determine the minimum and maximum cost for acquisition functions. The TDABC analysis provided library management with enough insight into cost drivers to enable them to make changes in software and workflows. In doing so, they provided a model for doing this sort of analysis for similar processes in other libraries.

In another attempt to save money, Mosbo and Ballestro investigated the use of secondary and used-book sources to purchase books.[7] In doing this study, they considered cost, added workflow for acquisitions staff, and potential additional work for the preservation unit. The library selected a random sample of 200 titles and ordered them from vendors on Amazon, ABEBooks, Alibris, and Biblio, all of which had high approval ratings and fulfillment rates. They purchased only books with conditions rated as "very good" or better. The authors compared the purchase and shipping costs for these titles to the list price and to what the cost would have been had the titles been firm ordered from their approval vendor. Of the 200 items purchased, the condition of twelve met the criteria for review by the preservation unit on receipt. Seven of these received minor treatment. After figuring in the cost for the preservation treatments and the small amount of extra staff time required to purchase the items from the secondary market, the library's costs were $3,639.29 less than if they had paid the list price. The authors concluded that purchasing books from the secondary market can save money but conceded that services provided by their primary book vendor, such as the ability to download bibliographic records and invoices directly into an ILS, would offset some of the savings.

Opportunities also exist for streamlining the acquisition of digital materials. Horava noted that the growth in spending on electronic resources has had a major impact on workflows that had been geared toward acquisition of print materials.[8] Print materials, while still important to some fields, now compete with electronic materials that have been incorporated into new workflows. Libraries must negotiate multiple pricing considerations for digital materials. These include subscription, firm order, annual access fees, and cataloging record fees. The prevalence of consortial purchasing only increases this complexity because this sort of activity comes with less control over content and the need to agree on pricing and cost-sharing models. In this environment, the importance of licensing is emphasized. User rights, library responsibilities, vendor responsibilities, legal boilerplate issues, perpetual access, preservation arrangements, and post–cancellation rights need to be considered. Negotiating skills have become critical because protections afforded libraries by copyright legislation in the print world do not automatically extend to electronic content. Rather, these rights must be specifically secured in licensing agreements. To free resources to take on this new responsibility, the work of acquisitions going forward will include taking full advantage of processes and collaborations with vendors and publishers so that materials are acquired efficiently and staff are assigned to duties for which automated processes are not suitable.

Lamoureux and Stemper reviewed developments in licensing trends and advocated for greater uniformity and clarity in licensing terms and conditions.[9] As research libraries move to online-only subscriptions, the need for securing the right to conduct interlibrary loan (ILL) has increased. Publishers and librarians negotiating terms need to understand ILL workflow, and tools and licensing terms should replicate best practices established for print.

As decreasing library budgets inevitably affect library suppliers as well as libraries, Williams and Downes discussed the need for libraries to assess the financial health of their vendors and suggested methods for monitoring vendors' viability.[10] Good stewardship demands libraries pay attention to their vendor's financial health throughout the working relationship. Bankruptcies, mergers, vendor restructuring, and even high staff turnover can pose risks to libraries. One step that libraries can take to protect themselves from these risks is monitoring the health of critical vendors. By gathering information about a vendor's financial health and recording it in a fashion that allows for easy tracking over time, a library may notice if a company is having trouble and take appropriate measures. This is timely advice because Powell reported that 60 percent of publishers indicate that the economic downturn had a negative impact on their business for 2009 and only strong sales outside of North America had kept EBSCO's worldwide sales revenue through February 2010 relatively flat—down only 0.5 percent.[11]

The transition from print to electronic collections is still a topic that garners attention. Bock and Burgos-Mira wrote about the challenges faced by multi-campus environments during this transition.[12] They described the evolution of a cooperative and collaborative environment in the libraries, the introduction of university-wide library committees, and the holding of retreats at various campus locations to manage the acquisitions of electronic resources.

Electronic resources are becoming increasingly common in the developing world as well. Pilgrim and Dolabaille discussed the challenges the University of the West Indies' Alma Jordan Library faces in managing the transition to electronic resources.[13] Staff training, revision of the organizational structure, and reallocation of the budget are ongoing. Inadequate funding, varying levels of technological infrastructure, and small user populations on islands have slowed the development of an organized consortium, but steps have been taken to cooperate in acquiring databases. The Alma Jordan Library intends to form an electronic resources management team, develop an electronic resources policy, and possibly purchase an electronic resources management system to meet the challenges of managing electronic resources.

Anyone seeking a good overview of acquisitions may want to consult a new edition of *Introduction to Technical Services* by Evans, Intner, and Weihs.[14] The chapter on acquisitions reviews the relationship between collection

development and acquisitions; discusses general procedures for verification, ordering, and reporting; explains acquisitions methods from firm and standing orders to subscriptions and blanket orders; and examines the pros and cons of gifts. Holden's *Acquisitions in the New Information Universe: Core Competencies and Ethical Practices* is another good source for a thorough discussion of acquisitions.[15] This work covers traditional acquisitions concepts of ordering, receiving, licensing, and workflow and emphasizes how they fit within access and service.

Tools and Resources Used in Acquisitions Work
Electronic Resource Management Systems

The ongoing challenge of managing electronic resources continues to garner the attention of librarians and vendors. Hartnett and colleagues described their experiences with attempting to implement two electronic resource management systems (ERMS).[16] These attempts were made with the goal of locating and managing the information found in knowledge bases, order records, networked folders, spreadsheets, file cabinets, and collective memory in an ERMS. They first worked with the ERMS offered by their ILS vendor. They had hoped that this ERMS would allow them to manage workflows and to improve communication of information to staff and users. During set up of this ERMS, they determined that the product was unintuitive in several areas ranging from terminology to workflows. Some features did not work or did not work well, and some promised features were never developed. Eventually, they moved to another ERMS. Although this product was less complex to set up, they still found that it did not work with resources that included e-journals and e-books and did not integrate with other products. Thus it could not pull financial information from the ILS or statistics from vendors. The link resolver also could not sync with another vendor's knowledgebase. When looking for an ERMS, these authors recommended compiling a list of the most pressing needs and finding a system that addresses them.

Silton and LeMaistre conducted a survey of users of Innovative Interfaces' ERMS, attempting to determine satisfaction with implementation, impact on workflow, and impact on patrons.[17] Respondents indicated some dissatisfaction with implementation and the impact on staff workflows. However, the survey did show some positive effects that coverage load and license information display had on patron access.

Collins and Grogg surveyed librarians and ERMS vendors in an attempt to develop a clear understanding of the state of ERMS.[18] The surveys showed that librarians were most concerned with ERMS' ability to manage workflow, licensing, and statistics; store administrative information;

provide support for acquisition functions; and interoperate across systems including the ILS. The surveys revealed a high level of satisfaction with license management, although respondents expressed concern with displays in next-generation discovery layers. Statistics management also proved to be problematic because ERMS failed to implement the Standardized Usage Statistics Harvesting Initiative (SUSHI) standard. SUSHI is a National Information Standards Organization (NISO) standard that describes the automated harvesting of statistics through a web service. A common element of many of the shortcomings of ERMS is lack of interoperability. Lack of interoperability affects the ability to determine cost-per-use or to gather cost and vendor information from the ILS. The key to ERMS working better with other systems is developing standards and putting them to use.

Whitfield noted that expense and lack of interoperability have been factors in libraries deciding not to implement ERMS.[19] To overcome these problems, some libraries have chosen to work with the open-source ERMS Centralized Online Resources Acquisitions and Licensing (CORAL) (http://erm.library.nd.edu). Developed by the University of Notre Dame's Hesburgh Libraries, CORAL is built using PHP 5 and MySQL technology and consists of acquisitions, licensing, contacts, statistics, and cancellation modules from which libraries can choose when deciding how to manage their resources. Whitfield was only using CORAL as a desktop application, yet it allowed for more efficient management of electronic resources.

Gustafson-Sundell did a careful review of the marketplace and a detailed assessment of the local situation at the Northwestern University Library (NUL) before deciding to implement CORAL's licensing module.[20] The decision to go only with the licensing module was based on a degree of satisfaction with the effectiveness of the SFX link resolver, A–Z lists, and MARC records service already in use at NUL and a reluctance to take on the expense in funding and staff time to implement a full-fledged ERMS. Gustafson-Sundell stated that libraries should carefully consider tools already in place, prior commitments of staff, and other local conditions before deciding to implement an ERMS. Milczarski and Garofalo also described conducting a needs assessment and a review of the marketplace before deciding to implement True Serials.[21] True Serials is a hosted ERMS that is powered by the open-source CUFTS solutions (http://researcher.sfu.ca/cufts) from Simon Fraser University. This option offered the integrated A–Z database and a link resolver with a small financial burden.

Standards

Librarians, vendors, and publishers who work with e-resources need to follow the development of standards

that affect their work. Pesch offered a summary of current and developing standards that are useful for acquisitions, collection assessment, and access, and he explained why they matter.[22] Counting Online Usage of Networked Electronic Resources (COUNTER) and SUSHI together allow for automated harvesting of meaningful usage data for databases, e-journals, and e-books. Journal Usage Factor, EigenFactor, and Metrics from Scholarly Usage of Resources (MESUR) offer alternative means of assessing scholarly impact factors. Shared E-Resource Understanding (SERU) proposes an alternative to signed license agreements that set expectations on the use of content and the responsibilities of libraries and publishers. Knowledge Bases and Related Tools (KBART) and Improving OpenURLs Through Analytics (IOTA) advance linking by improving the accuracy of data in the knowledge base and the quality of data in the OpenURL. Establishing Suggested Practices Regarding Single Sign-On (ESPReSSO) will allow for greater effectiveness of single sign on authentication systems. I² (Institutional Identifiers) would create standard identifiers for institutions and make transfers and transitions easier and the gathering of data more efficient.

Carpenter discussed the status of National Information Standards Organization (NISO) standards affecting electronic resources management and explained why some standards have gained wider adoption than others.[23] He noted that the SUSHI Protocol has been successful and he attributed that success to "the pervasiveness of the problem that it addresses, tying compliance to existing end-user expectations, the relative simplicity of its implementation, and the ongoing support and education that is provided surrounding the standard."[24] Carpenter urged that focus be placed on projects that are likely to have broad adaption, where savings are great, and that will be easy to implement. These are the projects that will be most productive, will have the greatest impact on the distribution of content, and will be of the greatest benefit to publishers, libraries, and users.

Additional Tools

Many tools in addition to ERMS have been applied to getting the work of acquisitions done. Some offer variations of established practices while others apply tools that were not developed for libraries. Shapiro described using Google Calendar at Montclair State University to expedite the handling of renewals, monitor the beginning and end of database trials, and track scheduled meetings with vendors.[25] Shapiro found Google Calendar easy to use and effective.

Leffler and Zuniga, in an attempt to reduce time spent by the University of Northern Colorado Libraries' staff inputting license terms into a newly purchased ERMS, used Microsoft Excel to develop a form to record license data.[26] Staff reviewed license agreements and filled out the Form for License Details (FFLD) before installation of the ERMS. Information input in the FFLD included start and end dates, electronic reserves, course packs, ILL, and access terms. The use of this form gathered critical information from license agreements in a normalized and easily accessed manner. Leffler and Zuniga found that the form streamlined the entering of licensing information into the ERMS and suggested that it would be useful for any library maintaining licensing agreements for electronic resources. England, Fu, and Miller took a similar approach at University of Maryland University College Library to improving management of e-resources.[27] They used checklists to limit mistakes, reduce complexity, and ensure that work on e-resources was done effectively. Pan, Bradbeer, and Jurries of the University of Colorado Denver Auraria Library described using a blog as a centralized management tool to track e-resources issues.[28] The blog posts included a description of a problem, assigned troubleshooting to an appropriate person, set the priority and status, and allowed space for notes. The blog enabled the authors to capture, organize, and easily access troubleshooting information. An offshoot of the use of the blog was the creation of a community of practice among the authors. This community was a self-formed group of peers that utilized complementary skills to respond to e-resources access problems in which leader and follower roles shifted between the participants depending on the circumstances of particular problems.

Wilson reported on three libraries using web-based software not designed for the library market to manage e-resources acquisitions and workflows.[29] JIRA (www.atlassian.com/software/jira), a task and problem tracking software is being used to track the work and staff involved in managing e-resources from ordering to metadata provision. Drupal, a content management system that allows users to create and manage websites, is being used to create a tool that tracks workflow, stores data, and manages public access to databases and journal collections. Basecamp, an online project management tool, is being used to support acquisitions and workflow. Usability, the ability to customize, and having a single, easily accessed place for collocating the information important for managing e-resources, are reasons cited for utilizing these tools. Understanding processes and taking advantage of software already available to a campus or library are highly recommended.

Librarians often take the work of managing e-resources with them as they attend conferences or are away from the office for other reasons. Hartnett and Price tested the potential of Apple's iPad as a mobile management tool.[30] They reviewed the tasks addressed in their work and investigated the availability of apps that would enable the iPad to do this work. While they found the iPad's size, the availability of both Wi-Fi and 3G service, and its intuitive interface

advantageous, they concluded that problems with printing, file management, and working directly with a server limited the iPad's effectiveness. The development of streamlined library apps may make the iPad a more useful mobile tool for librarians.

Bindle and Boden explored the potential benefits of using digital photography for evaluating prospective gift-in-kind donations.[31] They described a method for using readily available equipment, such as a compact point-and-shoot digital camera and a tripod with an invertible center column, to create digital images of each item in a potential donation. These images could then be used in an assessment of the potential gift, shared with appropriate parties, and used to promote the discovery and use of the gift.

Purchasing Models
Approval Plans and Standing Orders

In this prolonged period of economic challenge, libraries are looking for means of increasing efficiency and effectiveness. Approval plans are not immune to scrutiny. Alan and colleagues conducted a study designed to evaluate the monograph approval plan profiles at Penn State and the University of Illinois Urbana-Champaign (UIUC) for use, cost effectiveness, and coverage.[32] The goals of the study were to develop benchmarks for evaluating the effectiveness of an approval plan profile and develop a reproducible method with baseline data that would allow other libraries to collect data and conduct their own studies. The study collected one fiscal year of approval plan purchasing data and up to thirty-three months of circulation use data. The results of the study showed that 41 percent of the monographs received on approval by Penn State overlapped with those received on approval by UIUC, and 51 percent of the items received on approval at UIUC overlapped those received by Penn State. The lower amount of overlap for Penn State is likely due to the larger number of titles it acquired on approval. The study also revealed that 31 percent of Penn State's approval plan receipts and 40 percent of UIUC's approval plan receipts did not circulate during the study period; that the average cost per use was $19.83 for Penn State and $22.28 for UIUC; and that the average circulations per title was 2.85 for Penn State and 1.73 for UIUC. This study set a benchmark that these and other libraries can use to evaluate attempts to make approval plans more efficient and to ensure that they are serving the needs of their institutions.

Brantley took a different approach to evaluating approval plans.[33] He assumed that books reviewed in the highly regarded review journal, *American Historical Review*, should be in academic library collections due to the attention given them by the journal. In reviewing the holdings of twenty-one members of the ARL, Brantley found that books from small publishers or those classed outside of disciplinary boundaries are frequently missed in the approval process. This demonstrated that, while approval plans can be efficient, they require expert oversight to ensure they deliver the full range of quality titles.

Buckley and Tritt discussed how they introduced e-books into their monograph approval plan to increase the number of e-books available for academic programs with large numbers of off-campus students.[34] Working with their vendor, they determined subject and nonsubject parameters and set a three-month delay on delivery of print versions of titles to allow time for the e-version to be released. E-books titles that matched a profile were made available for online review and selectors were able to accept, reject, or defer each title. The vendor supplied MARC records with invoice data for the accepted e-books and these records were added to the library's catalog. Buckley and Tritt cautioned that e-book approval plans are subject to decisions, such as the delay between the release of print and digital version of titles, made by publishers that affect the functionality of the approval plan, but they considered the inclusion of e-books in their approval plan to be successful.

Fong and colleagues from the Colorado Alliance of Research Libraries experimented with a collaborative approach to managing duplication of print monograph holdings across a consortium using coordinated approval plans.[35] Working with eight libraries, two book vendors, and four subject areas, they attempted to build a process that would control duplication of core undergraduate titles, build stronger overall collections, free selector time, and free funds for the purchase of unique materials. While the pilot did not effectively reduce duplication, save selector time, or save money, the pilot did push selectors and technical services librarians to develop new procedures and to work more collaboratively across the consortium. It also helped to build a culture of cooperation and experimentation between and within the participating libraries.

Handman discussed evolving models for delivery of educational and documentary video content online.[36] Increasing user expectations for remote access, the need to replace deteriorating collections of video on obsolete media, the integration of learning management systems in educational programs, and the increased emphasis on providing services for remote and disabled patrons has increased the demand for video on demand (VOD). Handman reviewed VOD delivery modes and licensing models and concluded that none of the models serves the broad scope of institutional needs. Libraries will continue to build collections of videos while experimenting with just-in-time models.

Cross maintained that, in a time when libraries no longer strive for completeness, the need for standing orders has diminished.[37] Standing orders usually are established

to ensure that a multivolume series will be held by a library free of any missing volumes. These irregularly published books can be overlooked when reviewing monograph expenditures because they are usually purchased with serials funds and are overlooked in reviews of serials expenditures because they are not journals and do not increase in price at a rate that raises flags. Thus they can arrive in a library for years without review for appropriateness of coverage or price effectiveness. Cross suggested that acquisitions and collection development personnel gather the ongoing standing orders in a spreadsheet for evaluation. Obsolete titles or series that no longer meet the needs of the institution should be cancelled. Other titles may be moved to approval plans. Taking these items out of the serials flow imposes structure on a grey area of the collection budget, clears items from active titles lists, and allows for future assessments of a collection to be done more efficiently.

E-Books

Interest in e-books continues at a high level with vendors and publishers attempting to develop sustainable business models, and libraries experimenting with means of getting these books to their users. While e-book availability has expanded in recent years, issues have hindered their adoption by libraries and users. Slater identified a number of such issues.[38] These included a continuing reluctance on the part of many patrons to use e-books. These patrons find the mechanisms for discovering and accessing e-books bought and licensed by a library to be more problematic than accessing freely available e-books through the web. When patrons have successfully accessed a title, they are frustrated by the limitations placed on printing, downloading, and repurposing the content by digital rights management (DRM) restrictions. Furthermore, many scholarly titles still are not available as e-books. The challenges associated with licensing, preserving, and acquiring e-books remain more prevalent than they do for the print counterparts.

Many libraries are purchasing e-book collections directly from publishers because these collections can be DRM-free, and print-on-demand options are available for patrons. Bucknell reviewed the COUNTER usage reports for one such collection and found that this approach was working well because use was good across most subjects, the number of unused titles diminished each year, older titles continued to be used, and the cost-per-use was relatively low.[39]

Other libraries have tried this approach and found it problematic. Schroeder and Wright reviewed their experience with leased collections such as those offered by ebrary and Safari and found that only 20–35 percent of the titles in the collections were being used.[40] They also noted that while the publishers' frontlists and backfile collections offer libraries the option of purchasing many books easily, the purchase of these sorts of collections may not be sustainable for libraries with shrinking budgets. They advocated the use of patron-driven models that integrate e-books with print approval profiles.

Those looking for a thorough treatment of e-books may want to consult *No Shelf Required: E-Books in Libraries*, edited by Sue Polanka.[41] This work offers chapters on the evolution of e-books; their use in public, school, and academic libraries; an examination of the process of purchasing e-books including business models, licensing, workflow processes, cataloging, and management; usage; and standards including EPUB (an open e-book standard designed to optimize text for display devices), DRM, the International Standard Text Code (ISTC; a numbering system providing unique identifiers for text-based works), and SERU. In a more concise treatment of these issues, Polanka offered a quick explanation of business models; discussed the challenges and advantages of purchasing from publishers, aggregators, or wholesalers; and described the benefits and difficulties of purchasing as part of a consortium.[42] She recommended that libraries evaluate vendors with whom they are considering working for content, price, DRM restrictions, availability of MARC records, licensing terms, and other features. Most importantly she stressed the need for libraries to understand their primary goals for purchasing e-books.

Just-in-Time Models

Whether it is referred to as patron-driven acquisitions (PDA), purchase-on-demand, patron-initiated purchasing, or demand-driven selection, just-in-time purchasing has received a good deal of attention as libraries attempt to meet the needs of patrons while limited by distressed budgets. Several articles evaluated initiatives to purchase books and similar items requested through ILL. Tyler and colleagues conducted a very thorough evaluation of a five-year trial of a small purchase-on-demand program based on ILL requests at the University of Nebraska-Lincoln Libraries.[43] Their evaluation showed that the selected items were suitable for the library and fell within high-use Library of Congress classification subclasses. These items also circulated at a higher rate and had elevated amounts of repeat circulation when compared to those purchased through traditional channels.

In a three-part series, Purdue University librarians evaluated a decade of patron-driven collection development.[44] Anderson and colleagues analyzed the purchase of liberal arts books through the program. Criteria for purchasing ILL book requests were set initially to include only scholarly, nonfiction books in English published in the past five years with a maximum cost of $150. Over time, the English language requirement was relaxed, the publication range was tightened to those published in the past three

years, and requests for DVDs were included. Requests were reviewed by a staff member who decided if an item met the requirements. Analysis of the program showed that almost half of the books purchased were requested by members of liberal arts departments, the majority of the purchased materials were suitable for the collection, and many of the purchased items were cross-disciplinary in nature. In part 2 of the Purdue study, Bracke analyzed the science and technology books.[45] The findings for these items were similar to those purchased for the liberal arts—the purchased items were deemed appropriate for the collection. Many of the purchased items identified emerging areas for selectors to review. Moreover, only 17 percent of the books had not circulated beyond the initial ILL request. Although Purdue heavily emphasizes science and technology, only 15 percent of items purchased via the program were in the science and technology area. In part 3 of the study, Nixon and Saunders focused on circulation of the books purchased on demand.[46] Their findings showed that books purchased via ILL demand had higher circulation rates than those purchased through normal channels.

A review of an ILL PDA program at The Ohio State University done by Hodges, Preston, and Hamilton exhibited similarities.[47] The general criteria used for converting ILL borrowing requests to purchases included a $200 price limit and a publication date within the last two years. Computer manuals and popular culture materials were in general excluded as were items that could be borrowed. Textbooks were purchased for closed reserve. Graduate students were the most frequent beneficiaries of the program, and items purchased through the program averaged sixteen circulations during a twenty-two-month period.

Silva and Weible described an ILL purchase program at the University of Illinois at Urbana-Champaign that overcame problems with slow delivery of materials and an overwhelmed ILL and acquisitions staff by changing the source of potential purchases from unfilled regular ILL requests to items that could not be borrowed through a patron-initiated consortial borrowing system.[48] This change removed most items that were as difficult to purchase as they were to borrow from the workflow and allowed the ILL purchase effort to provide user-selected materials in a timely way.

Hussong-Christian and Goergen-Doll used commonly accepted measures such as turnaround times and circulation rates and employed patron feedback in evaluating an Oregon State University Libraries' ILL purchase pilot.[49] In this pilot, books purchased for graduate students or faculty had a printed band on them that explained the pilot. After the end of the academic session, an email message was sent to these participants with further explanation of the pilot and an invitation to provide feedback via an online survey. In the feedback, the patrons expressed high satisfaction with the pilot with many of them indicating that they would

recommend the purchased items to others or put them on reading lists. Patrons unsurprisingly indicated that quick turnaround time was very important to them. Hussong-Christian and Goergen-Doll reported that staff from ILL and acquisitions units had worked very closely together in the pilot, they were working toward an alignment that would enhance this collaboration, and they were considering implementing the Getting It System Toolkit (GIST). GIST is a tool that merges acquisitions and ILL workflows in a single interface.

Pitcher and colleagues at the State University of New York, Geneseo, developed GIST in an attempt to integrate ILL and acquisitions workflow in one interface and to automate the integration of decision support data.[50] GIST integrates with ILLiad ILL management software. It collects information from the user and pulls data from external sources. Staff using GIST can be informed of the patron's choice of format, the cost to purchase the item, and if a free version is available online.

In an attempt to quantify the extent of active ILL PDA programs in the Pacific Northwest, Fountain and Frederiksen surveyed the members of the Orbis Cascade Alliance, a consortium of thirty-six academic libraries in Washington and Oregon.[51] Through the survey, the authors wanted to determine the degree of participation in ILL PDA programs and how the participants implemented the programs, and to gauge interest in ILL PDA by nonparticipating libraries. Twenty-five percent of the respondents had active programs, 16 percent were considering introducing one, and 61 percent had no plans to do so. From those libraries taking part in ILL PDA, Fountain and Frederiksen were able to document typical workflows and parameters used to determine a request's eligibility for PDA rather than traditional ILL, such as an item not being available from a local consortial vendor, the request coming from an eligible borrower, the cost of an item falling within specified limits, and an item having a recent publication date. Budgets and workflow concerns were the main reasons cited by the libraries choosing not to employ ILL PDA.

While the literature offers much in support of ILL PDA initiatives, van Dyk cautioned that librarians may be underestimating the costs associated with ILL PDA.[52] According to van Dyk's analysis, an ILL PDA transaction is much more expensive than ILL borrowing costs. Therefore a $75 purchase-on-demand item would need to circulate as many as six times to break even with traditional ILL borrowing costs. van Dyk recommended more cost studies so that libraries can make better informed purchase or borrow decisions.

Many libraries have taken just-in-time selection a step further by purchasing e-books through PDA. Johnson explained that the most important thing a library should do before investigating models is to understand what is wanted

from this process.[53] PDA can be used to reduce expenditures, to expand the availability of electronic content, as an alternative to ILL, or as a means of shifting some of the responsibilities for collection development to the patron. Once the institution's goals are clear, he recommended that subject specialists come together with technical services specialists to ensure that technical aspects (e.g., level of cataloging, integration of records, and how invoicing would work) are considered along with collection development aspects. Johnson does a good job of reviewing options offered by vendors including single, multiple and unlimited simultaneous users, pricing models, purchase triggers, ILL privileges, and licensing issues.

De Fino and Lo explored the challenges of introducing PDA to a library.[54] In the model chosen by their library, a profile was created with the assistance of the vendor. The vendor then supplied records that were loaded into the catalog. As these books were discovered and used by patrons, a purchase was triggered. The vendor then sent reports of purchased items and the vendor records were replaced in the catalog with permanent full records. On a monthly basis, the vendor supplied a list of titles to be reviewed by selectors. Selectors then chose titles for inclusion in the project and the vendor then provided records for discovery.

McElroy and Hinken reviewed the steps the Orbis Cascade Alliance took in preparing to enter into a pilot consortium program for sharing e-books across member libraries.[55] The Alliance considered several models for acquiring e-books for the consortium. These included a demand-driven model with purchases triggered by use, the selection of individual titles by selectors, and the purchase of subject collections. Ultimately, the Alliance decided to pilot a combination of pay-per-view and demand-driven acquisition with a set number of short-term loans triggering a purchase. McElroy and Hinken also discussed the complexities of discovery and managing processes in a consortial environment.

Price explained why the DRM agreements that aggregators have with publishers have caused him to stay away from purchasing e-books through PDA for the Claremont University Consortium.[56] He has instead chosen to purchase packages directly from publishers like Springer or to utilize a PDA-like Evidence Based Selection (EBS) service from Elsevier. These DRM-free collections have features such as the option to download chapters as PDF files and the ability to cut and paste graphics that patrons want. Price suggested that publishers, aggregators, and book vendors work together to develop a system for delivering DRM-free books through a PDA system.

Levine-Clark decided to move to a multiple-format demand-driven acquisitions plan for the University of Denver Penrose Library.[57] He continues to use an approval plan, so some print books still come to the libraries automatically.

The print titles that have been purchased through slips in the past are now to be loaded into the library's catalog providing users with a request a purchase option. Records for PDA e-books from multiple vendors will be loaded in the catalog as well. The combination of the patron order slips for print and the purchase-on-demand for e-books will allow users to choose between print and electronic versions for many titles. When use of an electronic version of a title reaches the point of a purchase, the title will appear on a monthly invoice and any record for a duplicate e-version of the title will be removed from the catalog. Requests for print titles will be queued to the acquisitions department with many of the titles being ordered immediately and more expensive ones being forwarded to selectors. Levine-Clark expected that this transition to demand-driven acquisition will allow for the purchase of a better selection of books with a much lower percentage of low use titles.

Jones described another move to an integrated print and electronic PDA model at the University of Arizona Libraries.[58] In his case, budget cuts have led to reduced staffing and acquisitions funding at the same time that users have developed an expectation that information will be available wherever and whenever they want it. In the newly developed model, the print approval plan is expected to provide only core materials that have high expectations of use or items that are within a few high-priority subject areas. The print approval plan also is expected to ship only titles not available as e-books. A ninety-day delay is built into the delivery to allow time for the digital version of a title to be published. E-books that fit the profile are loaded into the catalog and a purchase occurs when it has been used three times (in this case, use excludes views of table of contents, title page, and index). Records for print books matching the profile but not available digitally are loaded into the catalog and the items are available for order by affiliated students, faculty, and staff. Records for print titles that have not been purchased are replaced with an e-book record as the digital version becomes available. Selectors also will order reference tools, multivolume titles, and other items as needed to address any imbalance in the collection. Jones concluded with the hope that a print copy on demand feature and integration with ILL will be added over time.

An excellent source of further information about PDA is *Patron Driven Acquisitions: History and Best Practices*, edited by Swords.[59] In this work, industry leaders explained how to utilize PDA and the implications of PDA on libraries and the publishing industry. Lugg explained how PDA is disrupting the supply chain for books. Nardini explained how approval plans work with PDA programs to control selection. Polanka and Delquié described PDA business models. Way and Garrison reported how they employ short-term loans in their e-book PDA plan, and Dillon explained how to control cost in PDA programs. The implications

of PDA for acquisition librarians are many. The concept of collection will continue to evolve as will the workflows, services, and tools needed to manage the new means of acquiring materials.

The Big Deal

During this prolonged period of flat or declining acquisitions budgets, the Big Deal continued to be a focus of attention. Horava noted that Big Deals offer substantial benefits, but they do so at the cost of diminished control over content and pricing.[60] More flexibility in content inclusion and removal, title replacement, cancellation rights, and continuing access to subscribed materials on nonrenewal of the deal is needed. While the Big Deal approach has supporters, it has been the center of tension as libraries have had to cancel titles during economic downturns.

Bergstrom observed that many academic libraries are now entering in to a third or fourth Big Deal with major publishers.[61] Annual increases for these deals have been in the 5–7 percent range, and most universities are now paying twice as much in real dollars than they were in the first year of the first contract. Libraries can refuse to renew a big deal, but they do so in an environment where publishers maintain high prices for pay-per-view and individual subscriptions to keep libraries tied to the Big Deal. Even so, some libraries have managed to do without Big Deals, choosing instead to subscribe to a limited number of titles and acquire articles from unsubscribed journals individually. Bergstrom found a marked difference in the amount libraries pay for a Big Deal. Hard bargaining has saved some libraries a great deal of money. He stressed that those involved in the negotiations should have a good understanding of the best outcome the library could achieve without the Big Deal and estimate the value of the Big Deal based upon the fallback position.

Pickett pointed out that the price libraries pay for a resource is not the only measure of its cost.[62] The time acquisitions personnel spend negotiating with vendors, conducting trials, activating packages, and reviewing licenses is costly. Between 2007 and 2009, Texas A&M University Libraries acquired eleven individually negotiated and licensed ProQuest databases, and more were likely to be added in future years. Each of these new databases required trials, negotiations, review of license by the university contracts administration, and set-up in library discovery systems. Renewals for ProQuest databases also took significant time. To reduce this expenditure of staff resources, Pickett's library negotiated a contract for all ProQuest content for a price similar to current expenditure. This price also included all new ProQuest content for the length of the five-year contract. In this way, the Big Deal business model was used to secure content at a reasonable price while reducing the costly staff expenditure that had accompanied prior arrangements.

Open Access

Librarians have long been advocates of open access and have supported open access initiatives in a variety of ways. Martin suggested that librarians become knowledgeable about open access resources and prioritize management of them.[63] Linking patrons to open access materials is a valuable service, and libraries should strive to make this access seamless. Bhatt advocated utilizing a publication access management system such as Serials Solutions to provide access to as many open access collections as possible.[64] Cryer and Collins suggested becoming familiar with government funding initiatives such as the National Institutes of Health Public Access Policy, participating in Open Access Week, and promoting the use of open access models by ensuring that open access journals are available through the library's catalog.[65] Librarians should be knowledgeable of institutional open access funds and local policies for their use. Licensing language that supports self-archiving or archiving in an institutional repository should be made widely available. Librarians also should be familiar with open access policies and prepared to promote open access concepts through daily activities.

Hellman discussed models for open access e-books.[66] For an e-book to be considered open access, intent on the part of the publisher to make it openly available with an appropriate license and effective distribution is necessary. Possible models for open access e-book publishing include do-it-yourself, public funding, crowd sourcing, and crowd funding. Once produced, open access e-books need a means of effective distribution. Hellman noted that venues for cooperation, such as Open Library and HathiTrust, already exist but suggested that others will be needed. Open access e-books have great potential, but work is needed to ensure that they are widely available.

Conclusion

The acquisitions literature review for 2010 and 2011 reveals libraries, vendors, and publishers working cooperatively and collaboratively in the face of the continuing economic downturn. Tools are being developed, refined, and repurposed to meet the needs of librarians managing electronic resources. Improving standards are easing the flow of information and improving the user experience. Approval plans are expanding to deliver e-books and print books on demand while being otherwise narrowed to only supply print books with high probability of use. Just-in-time acquisition models

are being embraced because they show promise of more efficiency than traditional acquisition models that rely on title selection by librarians. The Big Deal and open access publishing draw praise and critical attention. Acquisitions specialists affect and react to these developments. They adjust workflows and management structures to accommodate the changing nature of their work while developing new skills that will enable them to meet coming challenges.

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Online, Practical, and Free Cataloging Resources

An Annotated Webliography

John Baga, Lona Hoover, and Robert E. Wolverton Jr.

This comprehensive annotated webliography describes online cataloging resources that are free to use, currently updated, and of high quality. The major aim of this webliography is to provide assistance for catalogers who are new to the profession, unfamiliar with cataloging specific formats, or unable to access costly print and subscription resources. The annotated resources include general websites and webpages, databases, workshop presentations, streaming media, and local documentation. The scope of the webliography is limited to resources reflecting traditional cataloging practices using the Anglo-American Cataloguing Rules, 2nd edition, *RDA: Resource Description and Access, and MAchine Readable Cataloging (MARC) standards. Non-MARC metadata schemas like Dublin Core are not covered. Most components of cataloging are represented in this webliography, such as authority control, classification, subject headings, and genre terms. Guidance also is provided for cataloging miscellaneous formats including sound and videorecordings, streaming media, e-books, video games, graphic novels, kits, rare materials, maps, serials, realia, government documents, and music.*

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Catalogers today face numerous challenges in their work—ever-changing formats of items to catalog; keeping up with new cataloging rules and standards; lack of additional catalogers to help with training and workflow; and minimal budgets to purchase cataloging-related resources. In addition, today's librarians with a library and information science degree may not have taken cataloging courses as part of their curricula, leading to uncertainty concerning which resources to use when facing cataloging issues.

To assist new and veteran catalogers in identifying and evaluating a variety of cataloging resources available online, the authors have developed an annotated webliography. The authors' intent in creating this webliography is to help beginning catalogers in the field, save catalogers time with a selection of practical one-stop resources, pinpoint free resources for libraries with limited budgets and staff, and update the literature of annotated bibliographies and webliographies for catalogers.

The scope of the webliography is limited to resources used in traditional cataloging based on the *Anglo-American Cataloguing Rules* 2nd edition (*AACR2*), *RDA: Resource Description and Access*, and MAchine Readable Cataloging (MARC) standards.[1] Therefore, the webliography does not cover Dublin Core,

Encoded Archival Description, and other non-MARC metadata schemas.

Why a Webliography?

Numerous annotated bibliographies related to cataloging have been written over the past several decades. Specific topics covered in these annotated bibliographies have included authority control; electronic serials and continuing resources; maps; research in cataloging and classification; and theses and dissertations. Wolverton, and Russell and Spillane address authority control.[2] Blosser, Hagan, and Zhang speak to electronic serials and continuing resources.[3] Resources for maps appear in bibliographies by Kandoian and Plummer.[4] Conway's annotated bibliography presents research in cataloging and classification.[5] Wolverton and Hoover cover theses and dissertations.[6] In addition to annotated bibliographies on specific aspects of cataloging, others have provided a broader view of cataloging resources.[7]

While several annotated bibliographies in the past have focused on cataloging resources in print format, advances in technology during the last two decades have helped shift the accessibility of such resources from print to web-based. This has resulted in the development and use of the term, webliographies, to describe annotated resources available via the web.

Webliographies of cataloging resources have a number of advantages over bibliographies of print resources. They may be bookmarked so that catalogers can easily access them at point of need. They provide information that is more likely to be current and continuously updated than print resources. Lastly, webliographies point the way to information that may cost less to access than the print equivalent.[8]

A key goal of this webliography is to help catalogers new to the profession find reliable resources to aid their work. Most library science graduates are not fully equipped with the knowledge and skills needed to step into a full-time cataloging position.[9] Much of their training must then be acquired in the workplace.[10] Therefore the authors designed the webliography to include vital resources that beginning catalogers should know and use. As a corollary, the webliography should help novice catalogers identify the major authorities, organizations, and individual experts within the cataloging community.

In addition to helping new catalogers, the webliography is intended to benefit those seeking help with areas of cataloging in which they may not be experts, such as authority control, genre terms, and cataloging specific formats. Catalogers must tackle a diversity of formats, keep up with best practices, and apply a variety of rules and standards: this webliography outlines crucial resources to handle most formats and cataloging issues.

Another aim of this webliography is saving the cataloger time and energy. The web has thousands of cataloging-related resources; a Google search using the search phrase in quotes, "cataloging resources," results in more than 11,000 hits. This webliography provides relevant, vetted, and categorized online resources for most cataloging situations.

According to the 2012 special issue of *American Libraries*, the current economic recession has struck libraries hard and resulted in a widespread trend of "stagnating budgets" for all library types.[11] Consequently, many libraries have experienced reductions in library staff or lack of funds to purchase print or subscription cataloging resources. Taking the current budget cuts into account, this webliography presents only freely available resources on the web. Online subscription-based resources like *Cataloger's Desktop* and *Classification Web*, training courses, and commercial webinars are not included.[12]

Some libraries, regardless of budget constraints, employ a small cataloging staff or a single cataloger, especially in the case of school libraries and special libraries. These catalogers, burdened with the responsibility of organizing a collection by themselves, may have difficulty getting the training and help they need. The authors hope that this webliography can fill in the training gaps for solo catalogers who may not have the assistance of colleagues.

This webliography is not the first of its kind to assess resources for cataloging a broad range of formats.[13] However, another webliography similar in scope has not appeared in the literature for several years. El-Sherbini included categories such as cataloging tools by types and formats of materials, authority and subject heading work, dictionaries and encyclopedias, electronic discussion groups and workshops, vendors, professional organizations, and journals and newsletters.[14] Condron chose a sampling of online resources of interest to catalogers with information on such topics as departmental policies, vendor products, bibliographic standards, and training.[15] Owing to the transient nature of the web, websites can disappear, URLs are prone to change, and new cataloging resources emerge every year to reflect shifts in current practice. As such, many of the previously published webliographies contain outdated websites or broken links. The present webliography is intended to showcase current, well-established, and frequently updated resources.

What about RDA?

The resources in this webliography focus largely on the current standard practice, *AACR2*, with additional coverage of the new cataloging standard, *RDA: Resource Description and Access*. By all indications RDA is a reality: it is being

implemented by LC and other national libraries in 2013.[16] However, since *RDA* is relatively new, and LC and Program for Cooperative Cataloging (PCC) policies are still in flux, the resources available are not as numerous or definitive as those based on *AACR2*. Therefore the authors have selected some key resources presently available, with the caveat that once *RDA* is officially implemented, a surge of additional resources is likely to follow in the coming years. With the migration to *RDA* underway, a webliography of cataloging resources based primarily on *AACR2* may seem unnecessary. However, the transition to *RDA* could be a slow one. Millions of legacy records in *AACR2* will remain, resulting in an environment of mixed standards. Some libraries may choose not to adopt *RDA* and stick with *AACR2* for their local purposes. Cataloging courses will likely teach *AACR2* and *RDA* side-by-side. All of these trends suggest that *AACR2* is not going away, so the resources in this webliography should be relevant in the foreseeable future. Indeed, most of the resources are so well-established that they will probably be updated to integrate *RDA*. Additionally, many resources will continue to be valid despite *RDA*: the principles of classification and subject headings may be largely unaffected by it. Even looming changes to MARC coding may not be that dramatic and the information in these resources should not become totally obsolete.

Method

The method for assembling this webliography is based on extensive web searching and comparisons of resources cited by the major cataloging websites. The authors used the Google search engine, employing search terms that included, but were not limited to, "cataloging," "cataloging resources," "cataloging tools," and "cataloging [format]." No more than twenty pages for each search result were examined. By comparing links, citations, and resource lists found on prominent cataloging websites, the authors attempted to select the most promising cataloging tools on the web. Upon collecting an extensive group of candidate websites, the authors compared and contrasted the pros and cons of each resource, using this approach to narrow down the list to a manageable size.

This webliography was designed to be a practical and instructional tool for cataloging practitioners, focusing on what the authors viewed as the best online resources representing a variety of cataloging-related topics. These annotated web resources were selected based on the following criteria:

- *Quality of information*—Resources were evaluated for their quality of information on each topic, the number of times they were cited by other authoritative sources, and their adherence to high standards of cataloging.

- *Freely available on the web*—Since the price of professional materials impedes access for many libraries with budget constraints, the webliography focuses on resources that were available at no cost.
- *Comprehensiveness*—Cataloging aids were selected and examined for their completeness and breadth of information.
- *Currency of information*—Resources not updated since 2008 were generally excluded from the webliography. However, exceptions were made in cases where the authors determined that information before that year is still usable in cataloging practices.
- *Regularly maintained and updated*—Given the ever-changing information available via the web, preference was given to sites that were regularly maintained and updated with a minimal amount of broken links.
- *Authoritative individuals and organizations*—Resources created and maintained by reputable individuals or groups who appeared knowledgeable about the cataloging topics being addressed were favorably selected.
- *Ease of access*—Because time is valuable to catalogers, websites were selected that could be accessed quickly with a minimal number of clicks to get to the desired information. Ease of navigation within the site also was assessed.
- *Utility*—Resources intended to aid catalogers in doing their work, whether through practical examples or a quick-reference display of information, were especially favored.
- *Readability*—Preference was given to websites that presented information in an easy-to-read format with agreeable color contrasts, fonts, text layout, aesthetic design, and clear organization.

The resources in the webliography are arranged alphabetically under the following areas of cataloging:

- General Cataloging Resources
- Authority Control
- Classification and Cuttering
- Subject Headings, Form/Genre Terms, and Controlled Vocabularies
- Cataloging Tools by Format and Type
  - Art Books, Belles Lettres, Foreign Language, and Biblical Materials
  - Audiovisual Materials
  - Electronic Resources
    - Electronic Books
    - Streaming Media
    - Video Games
  - Government Documents
  - Graphic Novels

- ○ Kits
- ○ Maps
- ○ Music Scores and Sound Recordings
- ○ Realia
- ○ Reproductions
- ○ Serials
- ○ Special Collections, Rare Books, Manuscripts, and Archival Materials
- ○ Theses and Dissertations, Technical Reports, and Offprints
- Miscellaneous Cataloging Resources
- *RDA*

General Cataloging Resources

AUTOCAT. Accessed September 9, 2012. https://listserv.syr.edu/scripts/wa.exe?A0=AUTOCAT.

AUTOCAT has been a staple for catalogers since 1991. This electronic mailing list facilitates inquiries and information sharing on cataloging issues. Thousands of questions have been asked and answered ranging from basic MARC field help to problems with complicated formats. Contributing to AUTOCAT and searching the archives requires a subscription, but this is free and simple to do. The archives are updated in real time and enable basic keyword or advanced search strings. Since AUTOCAT has documented cataloging questions for more than twenty years, the archives provide a wealth of information shared by real world catalogers. Indeed, searching the archives is a surefire method of finding information that no other resource can offer.

LeGrow, Lynne, comp. "Library Cataloguing Aids." Accessed September 9, 2012. www3.ns.sympatico.ca/allegrow/cat.htm.

This site is a hub of cataloging resources organized by categories for *AACR2*, authority work, cataloging by format, Library of Congress Subject Headings (LCSH), and MARC, among others. Interspersed throughout the list of resources are humorous visuals and tidbits of information that will appeal to catalogers. Other features include direct links to past issues of the LC *Cataloging Service Bulletin*, active cataloging blogs, electronic discussion lists, and even a section for recent LCSH changes or additions. Although Library Cataloguing Aids is maintained by Lynne LeGrow, a cataloger at Halifax Public Libraries in Nova Scotia, Canada, the site is not geared exclusively toward Canadian catalogers; most of the resources are of broad relevance. While the site has a single-page layout, in addition to several broken links, it brings together many practical online resources for catalogers.

Library Corporation. "Cataloger's Reference Shelf." Accessed September 9, 2012. www.itsmarc.com/crs/crs.htm.

Catalogers Reference Shelf (CRS) is a free online collection of resources maintained by The Library Corporation (TLC) that delivers quick, easily accessed information about cataloging standards. Navigating CRS is facilitated in three ways: colorful buttons, a table of contents below the labeled buttons, and a menu on the sidebar. Content is based on the LC's MARC manuals and other reference works available through the LC Cataloging Distribution Service. Thus the information on MARC codes is essentially the same as what appears on the LC MARC Standards website. On CRS, however, the information is presented with hyperlinks so that less manual scrolling is required. The remaining resources are based on manuals available through the LC Cataloging Distribution Service with copyright dates ranging from 1984 through 2007. The site offers tools for cataloging specific types of materials, such as archival moving image materials, serials, graphic materials, loose leaf publications, map cataloging, and rare materials, as well as general resources that apply to cataloging in general: classification, Cutter tables, *Library of Congress Rule Interpretations*, application of LCSH, the *Subject Cataloging Manual: Classification* and *Subject Cataloging Manual: Shelflisting, and the NACO Participants' Manual*.[17]

Library of Congress. "BIBCO—Monographic Bibliographic Record Program of the PCC." Accessed September 9, 2012. www.loc.gov/aba/pcc/bibco/index.html.

BIBCO is the bibliographic record component of the Program for Cooperative Cataloging (PCC) and allows PCC Name Authority Cooperative Program (NACO) members to contribute high quality monographic records in all formats to national databases. The BIBCO website provides an overview of the program, FAQs on how to join, cataloging resources, summary reports of BIBCO meetings, annual reports, and lists of participating libraries, trainers, and training materials.

The website also contains a link to the *BIBCO Participants' Manual*, edited by Carol Hixson, David Banush, and Ana Cristán, which gives an overview of the program, including its history, criteria for membership, training, and creation of BIBCO records. Policies and practices of the program are described in detail, including bibliographic record content, authority control, and genre/form terms. In addition, LC, Dewey, National Library of Medicine, and Superintendent of Documents (SuDocs) classifications are discussed, along with record maintenance, retrospective conversion, and tools for BIBCO participants. The final section of the manual contains a variety of BIBCO sample bibliographic records, including core and full-level records. While not all libraries are BIBCO members, the information on this website can be helpful to new catalogers because it supplies guidelines for the development of high-quality bibliographic records.

Library of Congress, Cataloging Distribution Service. *Cataloging Service Bulletin*. Accessed September 9, 2012. www.loc.gov/cds/PDFdownloads/csb.

The *Cataloging Service Bulletin* (*CSB*) provided new and revised information about LC cataloging and classification practices and policies before its cessation in 2010. These included *AACR2*, *Library of Congress Rule Interpretations* (*LCRI*), new LC Subject Headings of Current Interest, Revised LC Subject Headings, Subject Headings Replaced by Name Headings, and American Library Association/Library of Congress Romanization tables. In addition, the *CSB* provided news on cataloging publications and cataloging projects. While the *CSB* ceased publication in 2010, PDFs of issues from Summer 1978 to Fall 2010 are archived on the website; much of the information in these issues is still relevant and may be helpful to catalogers.

Library of Congress, Network Development and MARC Standards Office. "MARC Standards." Accessed September 9, 2012. www.loc.gov/marc.

MARC Standards is the authoritative source for the standards of communicating bibliographic information in machine-readable form. Topics include bibliographic data, authority control, holdings data, classification data, and community information. There are code lists for geographic areas, languages, relators, and other lists of controlled vocabularies, such as genre terms and *RDA* carrier, content, and media types. MARC developments, updates, and general information are, likewise, easily accessed. Despite the large quantity of resources that can be found here, the site is well-organized and intuitive to navigate.

Library of Congress. "Program for Cooperative Cataloging." Accessed September 9, 2012. www.loc.gov/aba/pcc.

The Program for Cooperative Cataloging (PCC) website provides guidelines for the creation of high-quality bibliographic and authority records that can be shared by libraries and users worldwide, based on mutually accepted standards. To accomplish this goal, the PCC developed four component programs that focus on specific cataloging-related objectives: Monographic Bibliographic Record Program (BIBCO), Cooperative Online Serials Program (CONSER), Name Authority Cooperative Program (NACO), and Subject Authority Cooperative Program (SACO). The PCC site functions as a hub of resources. While not all libraries belong to a PCC program, the PCC website and its component websites provide a wealth of resources that can be helpful to new or veteran catalogers. The PCC website contains links to membership benefits, activities and reports, and task group information. It also provides a link to the Catalogers Learning Workshop site, which contains freely available information on resources related to the organization and classification of information, including workshop course

materials and webcasts. Recent additions to the site include resources related to *RDA* and *Functional Requirements for Bibliographic Records* (*FRBR*).[18]

OCLC. *OCLC Bibliographic Formats and Standards*, 4th ed. Accessed September 9, 2012. www.oclc.org/bibformats/en.

OCLC's *Bibliographic Formats and Standards* (*BFAS*) is probably one of the most frequently used resources for the everyday cataloger using OCLC Connexion or for catalogers seeking information that is clearly and concisely presented. When faced with uncertainties about MARC tags, subfields, and indicators, *BFAS* is the most convenient and authoritative source to consult. It delivers in-depth information on MARC fields used in OCLC WorldCat cataloging records, along with input standards and guidelines on entering data. In addition to describing fixed and variable MARC fields, *BFAS* discusses types and levels of cataloging, entry of ISBD punctuation, use of General Material Designation (GMD), and transcription of pre-*AACR2* and *AACR2* copy. *BFAS* also describes differences between full, core, minimal, and abbreviated-level cataloging and special cataloging guidelines for specific materials including theses and dissertations, reproductions and original microfilm publications, locally made videorecordings, electronic resources, and integrating resources. Guidance also is given on when to input a new record and the importance of quality assurance in OCLC records. For new catalogers, OCLC's *BFAS* is an invaluable tool for learning how to use MARC fields and understanding the importance of contributing high quality, shared records to WorldCat.

Pennell, Charley, and Lorraine Jackson. "Cataloguer's Toolbox." Memorial University Libraries, Memorial University of Newfoundland. Last modified August 16, 2012. Accessed September 9, 2012. http://staff.library.mun.ca/staff/toolbox.

This impressive collection of cataloging resources is organized into eleven broad categories. The quick reference category contains three subtopics of resources organized by activity, format, and subject. Resources falling under these subtopics encompass authority work, classification, Cuttering, and subject analysis. Also included are aids for cataloging government documents, music, rare materials, remote electronic resources, serials, theses and dissertations, and audiovisual materials. There is assistance for cataloging the subjects of art, law, and medicine. Other sections of the site include MARC coding information, LC cataloging tools, electronic lists, blogs and wikis, as well as a host of additional helpful information to catalogers. Resources run the gamut from general websites, national library catalogs, and practical manuals to miscellaneous reference sites on topics such as geography and architecture.

Special Libraries Cataloguing. "Cataloguing Cheat Sheets." Accessed September 9, 2012. http://special-cataloguing.com/cheats.

This extensive list of cheat sheets explores nearly every facet of cataloging, from subject headings and classification to format-specific tutorials. Although intended as training documentation for Special Libraries Cataloguing staff, headed by J. McRee Elrod, the information represents standard LC/OCLC practice and is therefore valid for most catalogers. A detailed cheat sheet has been written for nearly every format, making this site a reliable source for the jack-of-all-trades cataloger. The cheat sheets are heavily illustrated with MARC examples and are organized by area of description. Although each cheat sheet is brimming with substantial content, the layout does not always favor readability. Nevertheless, Elrod's information is dependable, current, and frequently updated.

Authority Control

FamilySearch. "Discover Your Family History." Church of Jesus Christ of Latter-day Saints. Accessed September 9, 2012. www.familysearch.org.

Established by one of the largest genealogy organizations in the world, the FamilySearch website can be used at no cost to obtain information on billions of names from numerous databases including the US Social Security Death Index, Family Tree, and International Census Records. A basic name search on the website results in a listing of people with that name, along with the index used to provide the information. Specific information on an individual depends on the particular index used, but can include a person's full name, gender, date and place of birth, date of death, names of parents, and the person's relationship to the head of the household. This site can be of great assistance to catalogers in establishing name authority records and verifying name information in bibliographic records.

Library of Congress, Cooperative Cataloging Team. *NACO Participants' Manual*, 3rd ed. Washington, DC: Library of Congress, 2005. Accessed September 9, 2012. www.loc.gov/aba/pcc/naco/documents/npm3rd.pdf.

This manual was developed as a resource for training in the Name Authority Cooperative Program (NACO), which is a component of the Program for Cooperative Cataloging (PCC). The *NACO Participants' Manual* provides in-depth information on how to create new authority records for personal, corporate, and conference names, as well as uniform titles and geographic name headings for jurisdictions. It also covers procedures for making additions and changes to existing name authority records. The manual provides helpful detailed examination of the MARC fields used in the process of creating and revising names, and numerous examples are supplied throughout the manual to illustrate the key components of name authority records. Appendixes in the manual include information on how to join the NACO program.

OCLC. "VIAF: Virtual International Authority File." Accessed September 9, 2012. http://viaf.org.

Although VIAF began as a joint project with OCLC, the LC, the Deutsche Nationalbibliothek, and the Bibliothèque nationale de France, a growing number of other national libraries and agencies have contributed to VIAF in recent years. It serves as an access point to major personal and corporate name authority files, geographic names (jurisdiction places only), and uniform titles worldwide with the goal of providing free authoritative information to libraries and other agencies on a global scale. VIAF allows national and regional variations in authorized forms of names and uniform titles to coexist and supports needs for variations in preferred language, script, and spelling. The authority records are accessible through a search box prominently displayed at the top of the screen. Although currently under development, this database of shared authority data is potentially useful on an international scale. Information on the history, governance, and the application process to participate in the project is available at www.oclc.org/viaf/default.htm.

Schiff, Adam L. *SACO Participant's Manual*, 2nd ed. Washington, DC: Program for Cooperative Cataloging, 2007. Accessed September 9, 2012. www.loc.gov/aba/pcc/saco/documents/SACOManual2007.pdf.

The second edition of this manual documents nearly every aspect of creating new subject headings under the Subject Authority Control Program (SACO), which is a component of the PCC. The manual offers information about the program, including when to make a subject proposal, how to conduct authority research for new subject proposals, guidelines, MARC 21 authority fields, and many examples of subject authority records. A section on preparing and submitting new classification proposals is provided with numerous examples given, including a section on Cutter numbers. The manual also discusses headings that are appropriate for use as free-floating subdivisions. Sample pages of new subject headings appearing on the LC's tentative weekly list and approved weekly list of reviewed proposals are provided, although recent changes in SACO procedures have changed the frequency of these lists from weekly to monthly.

Classification and Cuttering

Library Corporation. *Subject Cataloging Manual, Shelflisting*, 2nd edition: Contents. Accessed September 9, 2012. www.itsmarc.com/crs/mergedProjects/scmshelf/scmshelf/contents.htm.

The *Subject Cataloging Manual, Shelflisting*, second edition, specifically the "General" section, consists of notes and examples on constructing call numbers and Cuttering and thus assists in use of the LC classification schedules. Although the second edition of the manual has been replaced, much of the information is still relevant.[19] It can serve as a useful guide on classification and Cuttering for catalogers lacking the updated print version or Cataloger's Desktop.

Library of Congress. "Library of Congress Classification Approved Lists." Accessed September 9, 2012. www.loc.gov/aba/cataloging/classification/weeklylists.

This website lists new and revised LC classifications as determined by the LC Policy and Standards Division. New, revised, and obsolete class numbers are arranged in alphabetical order with captions showing their context within the classification. Regular review of this list can help keep catalogers up to date with new and revised LC classifications.

Library of Congress. "Library of Congress Classification Outline." Accessed September 9, 2012. www.loc.gov/catdir/cpso/lcco.

The classification outline is an authoritative cataloging tool, useful for quickly surveying the main classes in the LC classification schedules. An outline for each of the main classes is provided and accessed from an A-to-Z list. Each outline offers a broad but incomplete overview of the schedule with main class, subclasses, and corresponding class numbers. The complete schedule is available through printed volumes or LC's subscription-based *Classification Web*.

OCLC. "DeweyBrowser beta v2.0." Accessed September 9, 2012. http://deweybrowser.oclc.org/ddcbrowser2.

OCLC's Dewey Browser enables access to approximately 2.5 million WorldCat records classified according to the Dewey Decimal Classification (DDC) system. The interface is based on WorldCat's public display and incorporates faceted searching by format, language, and audience. A tag cloud display of broad subject terms facilitates subject searches. Each record includes basic bibliographic information for the item along with its Dewey Decimal number and the holding libraries within a radius of the user's zip code. This is a good substitute resource for librarians using DDC who lack access to OCLC WorldCat FirstSearch.

OCLC. "Map LC (LCC) to Dewey (DDC) Classification." Accessed September 9, 2012. www.questionpoint.org/crs/html/help/en/ask/ask_map_lcctoddc.html.

This website provides mapping of LC classes to Dewey numbers and vice versa. It is an OCLC project last updated in 2003. The website notes "that mappings to LCC classes, D, J and K are still in process. LCC Class R has been replaced . . .

by National Library of Medicine Classes QS—QZ and W." Although it is not current and is incomplete in several classes, it still can serve as a resource for catalogers transitioning from one of these classification systems to the other.

U.S. National Library of Medicine. NLM Classification 2012. Accessed September 9, 2012. www.nlm.nih.gov/class//index.html.

Here is the official National Library of Medicine (NLM) website of resources related to classification practices. The resources are comprised of introductory guides to using the NLM classification and its index, detailed outlines of NLM classes, a list of cancelled class numbers, and information about table G. Two search boxes on the page allow the user to search the NLM index or schedule and find NLM class numbers. The "quick tour" link below the search box plays a video tutorial about searching NLM classification. In addition, convenient links to the medical subject headings (MeSH) browser, free online training modules, and the NLM catalog are provided. For beginners to NLM classification, this website is an essential starting point.

Subject Headings, Form/Genre Terms, and Controlled Vocabularies

Dutkiewicz, Scott M. "Library of Congress Genre/Form Terms for Library and Archival Materials LCGFT Moving Image Genre-Form Terms." Last updated July 16, 2012. Accessed September 9, 2012. www.olacinc.org/drupal/capc_files/GenreFormHeadingsList.pdf.

This document is a continually updated list of all LC Genre/Form Terms (LCGFT) for moving image materials. All changes including new, modified, or cancelled terms are noted at the top of the document. While the list is similar to Joel Hahn's (see next entry), it focuses entirely on moving image materials and features more recently added or changed headings. For moving image materials, this compilation is one of the most accurate and authoritative resources of its kind.

Hahn, Joel. "LCSH Topical Headings Usable as Genre Headings." Last modified August 29, 2011. Accessed September 9, 2012. www.hahnlibrary.net/libraries/formgenre.html.

This resource is a list containing LCGFT, as well as LCSH usable as genre headings. Although the list appears in alphabetical order by default, it also can be sorted by category, thereby arranging all terms under an associated format like art, books, films, and music. Continually updated, the list is comprehensive and the terms are displayed with the correct MARC coding. Those headings specifically belonging to the LCGFT vocabulary appear in bold font to differentiate them from the other LCSH. While the list is comparable to

Scott Dutkiewicz's (see entry above), it is missing a number of recently added LCGFT. However, the author provides an online form to submit additions and corrections. Overall, the broader scope of this list renders it useful to catalogers because it can help them find terms applicable to many formats; not just moving images materials.

Library of Congress. "Library of Congress Authorities." Accessed September 9, 2012. http://authorities.loc.gov.

Library of Congress Authorities provides authority heading information by name, subject, title, name/title, and keyword. Each authority record can be viewed as a labeled display or a MARC display, and red boxes indicate if the heading is an authorized heading or cross-reference. FAQs and search tips also are provided, helping users optimize their searching. Retrieved authority records can be downloaded, printed, or emailed.

Library of Congress. "Library of Congress Subject Headings (LCSH) Approved Lists." Accessed September 9, 2012. www.loc.gov/aba/cataloging/subject/weeklylists.

New and changed LCSH that have been approved by the LC Policy and Standards Division (PSD) can be viewed at this website on a month-by-month basis. It covers the most recently approved subject headings and archives of previously approved headings from 1997 to the present.

Library of Congress. "Library of Congress Subject Headings Monthly Lists." Accessed September 9, 2012. http://classificationweb.net/tentative-subjects.

This website displays, on a monthly basis, information about new or revised proposals for subject headings and genre/form terms, submitted by librarians and reviewed by the LC Policy and Standards Division (PSD). The proposed changes are not approved at the time of their being posted and are not to be used in current cataloging practices until final decisions are made by the PSD.

Sha, Vianne. "Guide to the Usage of LCSH Free-Floating Form Subdivisions." Last modified March 9, 2000. Accessed September 9, 2012. www.itcompany.com/inforetriever/form_subdivisions_list.htm.

This resource is a nearly complete list of LCSH free-floating form subdivisions ($v) arranged in alphabetical order. Each free-floater includes a scope note about its proper usage along with a MARC example. Although it has not been maintained since 2000, the list is still accurate for the most part. Since its last update, roughly fifteen new form subdivisions have been introduced and only a handful of subdivisions from this list have been modified or rendered obsolete. Despite its static existence, the list is relevant and has remained available online for more than ten years. This list will be beneficial to those lacking access to or seeking

a concise alternative to the print edition of LCSH or the subscription-based *Cataloger's Desktop* version of "Free-Floating Subdivisions."

U.S. National Library of Medicine. "Medical Subject Headings." Accessed September 9, 2012. www.nlm.nih.gov/mesh/MBrowser.html.

Similar to the NLM Classification website, this one focuses on Medical Subject Headings (MeSH). It includes numerous guides introducing MeSH, a list of new headings for the current year, and links to the MeSH browser. The browser facilitates searching for MeSH authority files using keyword terms found in the main heading, qualifiers, or scope notes. The site offers a "navigate from tree top" option, which expands all classes in the tree structure for open-ended browsing. According to the browser search page, the authority file database is updated weekly.

Cataloging Tools by Format or Type

Art Books, Belles Lettres, Foreign Language, and Biblical Materials

Princeton University. "Princeton University Cataloging Documentation." Last modified April 2, 2010. Accessed September 9, 2012. http://library.princeton.edu/departments/tsd/katmandu/catman.html.

Located throughout this website are Princeton University Library's guidelines for cataloging items in a variety of formats. What distinguishes this resource from other websites, however, are the specialized guides for dealing with art books, belles lettres, printouts of webpages, biblical materials, and foreign language materials in Greek, Hebrew, Persian, and Slavic. The guides are accessed from the documentation page and under various dropdown sections of the sidebar menu, particularly "Cataloging" and "Team/Special." Although these guides are tinged with Princeton's local policies and practices, the information is unique and potentially useful to other catalogers.

Audiovisual Materials

When cataloging audiovisual materials, the best resources to consult are issued by Online Audiovisual Catalogers (OLAC). OLAC is an international organization of catalogers dedicated to teaching others about cataloging nonprint formats. OLAC's resources include conference workshop presentations by experts in the field, as well as training documents created by special task forces. At the time of compiling this webliography, many essential resources for cataloging audiovisual formats were presentations at the OLAC biennial conference in 2010.

Freeman, Robert. "The Return of Cataloging Unusual Sound Recordings." Slideshow presentation, OLAC Conference, Macon, Georgia, October 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/OLAC%202010-Advanced%20Sound%20Recordings.ppt.

Freeman's presentation provides a focused look at problematic sound recordings, such as enhanced, hybrid, encrypted, custom, and shaped CDs. DVD-Audio/SACDs, playaways, slotmusic, and remote sound files also are covered. The slides are replete with examples of MARC records and incorporate color photographs of the disc and container associated with each MARC example. While some slides cannot be understood without hearing the speaker, most convey useful information, such as fixed and variable fields unique to each format. The presentation provides a slide-by-slide comparison of an *AACR2* and *RDA* record, but this may not reflect current *RDA* practice. In addition, several slides are presented like cheat sheets with full MARC 006/007 coding for sound and videorecordings, chief sources of information, common physical description terms (e.g., "1 sound disc"), and order of MARC 5XX notes. A bibliography of resources related to the topic is included at the end. This resource will be an asset to any cataloger of special sound recording types.

Lisius, Peter. "Basic Videorecordings." Slideshow presentation at OLAC Conference, Macon, Georgia, October 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/Basic_Videorecordings_Presentation_OLAC_2010.pdf.

Lisius' workshop slides examine the process of cataloging videorecordings. They are arranged in order of MARC field beginning with the fixed fields. Topics include sources of information, when to input a new record, access points, coding the 007, and various 5XX notes special to videorecordings. This workshop presentation was conducted before genre term coding was revised; therefore, the MARC examples of LCGFT are obsolete. Although the resource is essentially a collection of slides, it is instructive and sufficiently clear enough to follow without hearing the presenter. An abundance of MARC coding examples and six full MARC record examples imbue this resource with practical value to the inexperienced cataloger.

OLAC Cataloging Policy Committee, DVD Cataloging Guide Update Task Force. *Guide to Cataloging DVD and Blu-ray Discs Using AACR2 and MARC 21:2008 Update* (includes Correction 4/23/10 for MARBI Tag 007 Code Change). Accessed September 9, 2012. www.olacinc.org/drupal/capc_files/DVD_guide_final.pdf.

This 71-page document offers guidelines for the descriptive cataloging of nearly all manner of DVD and Blu-ray disc types, including DVD-Video, DualDiscs, DVD-Audio, and DVD-ROMs. Based upon work done by the 2002 OLAC DVD Cataloging Task Force, this resource was created by OLAC's DVD Cataloging Guide Update Task Force in 2008 and corrected in 2010. The guide emphasizes the descriptive cataloging process and MARC coding; subject headings and added entries are not covered. Information is presented in logical order by MARC fields with plentiful examples and clear instructions. Images of DVD disc labels, containers, and symbols for identifying a DVD's technical specifications are embedded throughout the document, which help illuminate the differences between disc types. In addition, the document provides full MARC records for each DVD/Blu-ray disc type as well as citations for appropriate *AACR2* rules, *Library of Congress Rule Interpretations*, and links to other resources. This manual will supply catalogers with well-organized, inclusive, and practical information needed to complete descriptive cataloging of most DVD and Blu-ray disc types.

Weitz, Jay. "Advanced Videorecordings." Slideshow presentation, OLAC Conference, Macon, Georgia, October 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/weitzVideoAdvanced.pptx.

Weitz's presentation slides will appeal to any cataloger of videorecordings. They are organized by MARC field and convey guidelines for describing video and sound characteristics, region, color broadcast system, closed captioning, and aspect ratio, among other things. The slides are laced with vivid illustrations, MARC record examples, and rule citations. They offer detailed instructions and clarification on a variety of special considerations of video cataloging. Weitz provides clear instructions for creating the MARC 245 field, pinpointing correct identifying numbers for the 024 and 028 fields, and cataloging streaming media, series dependent titles, and locally produced videos. In addition, the history of video formats is elucidated, so the cataloger will know when to trust that the date on the item is accurate. These slides are a fine complement to Peter Lisius' "Basic Videorecordings" workshop (see entry above).

Weitz, Jay. "Cataloging Digital Formats." Slideshow presentation, OLAC Conference, Macon, Georgia, October 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/weitz%20CatalogingDigitalMedia2010.PPT.

These presentation slides by Weitz are similar in style and organization to his "Advanced Videorecordings" workshop (see entry above). Much of the content on DVDs is repeated here, but this one also encompasses Blu-ray discs, DVD-audio, playaways, dual discs, and streaming media. A history of each format is summarized to help the cataloger know that a playaway, for example, will not have a date before 2005. Most of the presentation slides are devoted to

MARC record examples and descriptive cataloging guidelines. Information is presented succinctly with appropriate illustrations, MARC record examples, and applicable models to follow. Because of the nebulous cataloging standards associated with these digital formats, this resource will aid any cataloger dealing with a variety of video discs and streaming media.

Wynne, Susan. "Cataloging Oral History Interviews." Slideshow presentation, OLAC Conference, Macon, Georgia, October 16, 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/OLAC%20 2010%20presentation.pptx.

Wynne's workshop offers a definition of oral history, explains its importance, compares cataloging methods applicable to oral history interviews, and includes a complete descriptive cataloging walkthrough. A third of the slides are devoted to the philosophy behind oral histories and the presenter's local library practice. The remaining slides are organized by area of description and order of MARC field. The slides include sections on fixed fields, subject access (including genre headings), and authority control. Of special note is the information about constructing notes and handling unusual 5XX fields. Additionally, the workshop clarifies collection and item-level description and presents an overview of classification choices such as classing an item under biography, local history, and subject of the oral interview. A full MARC record example is provided for easy reference. Catalogers may not encounter oral histories frequently, but if and when they do, this unique resource is guaranteed to supply answers to their cataloging conundrums.

Electronic Resources

Library of Congress, Network Development and MARC Standards Office. Guidelines for Coding Electronic Resources in Leader/06. Last modified December 2007. Accessed September 9, 2012. www.loc.gov/marc/ldr06guide.html.

This LC site provides detailed information and guidelines on coding the MARC leader/06, 006, 007, and 008 for electronic resources. These coding guidelines are organized by type of e-resource with snippets of MARC records for illustration. Brief definitions for the terms represented by the codes discussed in this resource are listed in the appendixes. Although some familiarity with MARC coding and cataloging electronic resources would benefit the user of this site, a beginner could profit from using it in conjunction with additional resources.

Weitz, Jay. "Cataloging Electronic Resources: OCLC-MARC Coding Guidelines." Last modified July 11, 2006. Accessed September 9, 2012. www.oclc.org/support/documentation/worldcat/cataloging/electronicresources/default.htm.

This integral piece of OCLC documentation gives an overview of considerations involved in cataloging electronic resources, such as the separate record versus single record approach and treatment of integrating resources. In addition, brief sections provide guidance in applying correct MARC fixed field codes, formatting the 856 field (Electronic Location and Access) in MARC records, and handling electronic reproductions of print materials. Links to CONSER and LC cataloging manuals are included at the outset; however, the currency of these manuals ranges widely from 1997 to 2011. The site was last revised in 2006 and therefore does not account for recent changes to electronic resource cataloging. It remains vital, however, for its preliminary information, guidance for the fixed fields, and substantive section on integrating resources, all of which are still current.

Electronic Books

Yale University Library. Metadata Services. "Cataloging Online Books Electronic Editions." Last modified December 4, 2006. Accessed September 9, 2012. www.library.yale .edu/cataloging/mst/marc/obe.html.

This is Yale University Library's guide to cataloging e-books. The guide has introductory paragraphs explaining the distinctions between remote and direct access, monographs and integrating resources, and electronic edition and reproduction style cataloging. However, most of the guide is devoted to descriptive cataloging and organized in sequential order of MARC fields starting with fixed fields and moving through all applicable variable fields. The write-ups for each field are concise, practical, and supplemented by examples. One disadvantage is that the webpage only displays on a small portion of the screen. The site offers a convenient table of contents with quick links to each MARC field. Although the guide incorporates some of Yale's local practice, it remains relevant to other libraries.

Streaming Media

OLAC Cataloging Policy Committee. Streaming Media Best Practices Task Force. *Best Practices for Cataloging Streaming Media*. Last modified March 2009. Accessed September 9, 2012. www.olacinc.org/drupal/capc_files/streamingmedia .pdf.

This is a complete guide to cataloging streaming audio and video formats. The information is relatively current, having been updated in 2009 with assistance from Jay Weitz. Sections clarify what streaming media is not and how to determine the chief source of information. Other sections describe how to create the MARC 006 (Fixed-Length Data Elements—Additional Material Characteristics) field

and 007 (Physical Description Fixed Field) and apply correct fixed fields. Explanations also are given for choosing between a single and separate record approaches for streaming media. The body of the document takes the reader through each pertinent MARC field step-by-step. Visually supplementing the document are full MARC records for various streaming media formats as well as screenshots of what actual streaming media looks like on the web. Additionally, a list of frequent file extensions (e.g., .flv and .wma) for identifying streaming media types is included.

Veve, Marielle. *The Streaming Guide to Cataloging Remote Access Multimedia: A How-To Virtual Manual for Catalogers*. Knoxville: Newfound Press, University of Tennessee Libraries, 2010. Accessed September 9, 2012. www.new foundpress.utk.edu/pubs/veve.

This online publication provides an engaging guide to cataloging streaming video, streaming audio, e-books, web games, and podcasts. The resource has a separate webpage devoted to each of the formats. Information is conveyed primarily through brief Flash Player video clips that look like animated PowerPoint slides. These videos illustrate the characteristics of each media format and how to catalog it. Videos for the fixed fields and each variable field have clear instructions and screenshots of MARC record examples. Unfortunately, according to a statement by the author, the guide will not be revised over time, and will not incorporate changes to cataloging policies or consideration of emerging formats. Nevertheless, it is efficiently organized, visually attractive, and informative. When cataloging peripheral formats like web games and podcasts, this guide offers exceptional information not found in many other online resources.

Video Games

Donahue, Nanette. "Cataloging the Weird Stuff." Slideshow presentation. Accessed September 9, 2012. www.slideshare .net/nanettedonohue/cataloging-the-weird-stuff.

These presentation slides offer guidance for cataloging video games, playaways, streaming media, and realia. Not many resources can be found that examine video game cataloging in such detail. While the slides on playaways, streaming media, and realia are significant, the section on video games makes this resource unique. The slides are designed with practicality in mind, showing important MARC record examples and color illustrations of the pieces being cataloged. Most of the current gaming consoles are featured: Nintendo DS, Wii, PlayStation, PlayStation Portable (PSP), and Xbox. Especially helpful are the many examples of MARC 300 (Physical Description) and 538 (System Details Note) fields, which will be unique for each console platform. The illustrations help the beginning cataloger or someone unfamiliar with the video game format understand what

information to look for on the game container itself. For example, some illustrations are images of the tiny print found on games, much like credits on DVD containers. Several slides comprise a thoughtful bibliography of print and online resources for each format covered. Considerable information is available in Slideshare's "Notes on Slide" feature, viewed near the comments area of the webpage. For the cataloger unfamiliar with cataloging video games, this resource will be of tremendous value.

Government Documents

Federal Depository Library Program. FDLP Desktop. "Cataloging & SuDoc Classification." Accessed September 9, 2012. www.fdlp.gov/cataloging.

FDLP Desktop is one of the few authoritative online resources for cataloging government documents. It includes cataloging aids concerning Congressional serial set publications and digital reproductions, as well as Government Printing Office (GPO) policies for creating separate and brief bibliographic records. The site offers classification guidelines for digital reproductions of monographs and an outline of the SuDocs classification scheme. The most important resource here is the fourth edition of GPO's Cataloging Guidelines, a 206-page manual with extensive instructions, policies, and detailed MARC record examples.

Graphic Novels

Lewis and Clark Library System. "Cataloging Graphic Novels." Last modified November 8, 2010. Accessed September 9, 2012. www.lcls.org/wp-content/uploads/2009/05/ Cataloging-Graphic-novels.pdf.

This local documentation is packed with practical descriptive cataloging and MARC field guidelines for graphic novels. The information is presented in the style of a cheat sheet demarcated with helpful headings. Although only three pages in length, the amount of information pertaining to graphic novels is solid. Instructions are direct and clear on how to code the fixed fields, enter the statement of responsibility, interpret the edition statement, construct added entry uniform titles, and handle the main entry for translations/adaptations among other things. Aside from a cheat sheet by Special Libraries Cataloguing (see under General Cataloging Resources), very few online resources can be found on cataloging graphic novels. What makes this particular one outstanding is its concision and reader-friendly layout.

Kits

Lewis and Clark Library System "Cataloging Kits." Last modified March 8, 2010. Accessed September 9, 2012. www.lcls. org/wp-content/uploads/2009/05/CATALOGING-KITS1.pdf.

This walkthrough is comprised of bulleted instructions and examples for creating all the fixed and variable MARC fields typically found in a catalog record for kits. The information is straightforward and useful for cataloging kits quickly. Although lacking pictorial illustrations and currency in genre and form terms, this tutorial is, in other respects, an easy-to-use guide for beginners and a quick reference for experienced catalogers.

Nimsakont, Emily D. "How to Catalog a Kit." Slideshow presentation. Last modified June 23, 2010. Accessed September 9, 2012. www.slideshare.net/nebraskaccess/ncompass -live-how-to-catalog-a-kit-4589170.

Nimsakont's presentation is an ideal resource for beginners to cataloging kits. Nimsakont goes through the entire cataloging process, from identifying kits to applying the necessary MARC fields and coding to describe them. The slides are simple and instructive with helpful photos of actual kits and screenshots of bibliographic records. Unlike the typical Slideshare presentation consisting only of slides, this one includes a recorded video of the actual presentation as an inset to the slides. The presenter's recorded use of a highlighter tool visually pinpoints key instructions and bibliographic elements on the screen.

Maps

Bertuca, David J. "Map Catalogers' Toolbox." University at Buffalo Libraries. Last modified August 25, 2011. Accessed September 9, 2012. http://library.buffalo.edu/maps/mapre-sources/map_cat_tools.php.

This is an exhaustive collection of map cataloging information and related resources organized in an accessible manner. Categories include physical description, classification, dates, map projections, map scale, subject headings, sample maps of different types, and gazetteers. The Map Format Field Guide outlines all essential MARC fields. A sample MARC record is provided. Further information includes links to map vendors, map cataloging associations, and a bibliography of print and online map cataloging resources. This is a top-notch resource that is routinely updated.

Music Scores and Sound Recordings

Koth, Mickey. "Music Cataloging at Yale." Yale University Library. Last modified September 4, 2012. Accessed September 9, 2012. www.library.yale.edu/cataloging/music/musicat.htm.

This expansive resource examines most aspects of music cataloging from uniform titles and subject headings to MARC tags and call numbers. Information is organized under sections for call numbers, authority control, uniform

titles, *AACR2*, MARC tagging, subject cataloging, sound recordings, videorecordings, language tools, and even *RDA*. Individual guides are provided for most important MARC field and cataloging decisions for sound recordings and scores. Additionally, each section features links to other general tools and supplemental online resources such as OLAC workshop presentations and Jay Weitz's column for the Music OCLC Users Group (MOUG) newsletter. Although "Music Cataloging at Yale" is intended for use by catalogers at Yale University, the information is widely applicable. Owing to its plenitude of detailed and unique guides for every facet of music cataloging along with links to other vital resources, this website is a one-stop place for music cataloging.

Realia

Lewis and Clark Library System. "Three Dimensional Artefacts [sic] and Realia." Last modified April 8, 2010. Accessed September 9, 2012. www.lcls.org/wp-content/uploads/2009/05/THREE-DIMENSIONAL-ARTE FACTS-AND-REALIA-Including-puppets1.pdf.

Based on *AACR2* chapter 10, this is an easy-to-follow guide for cataloging realia, artifacts, toys, games, models, and other three-dimensional objects. Features include *AACR2* glossary definitions, instructions for creating the proper workform in OCLC Connexion, the applicable MARC fixed field codes, and examples of variable fields. Furthermore, it includes a section devoted to cataloging puppets. Although this resource lacks illustrations and examples of current genre headings, it is a handy and straightforward guide recommended for both new and experienced catalogers.

Nimsakont, Emily D. "Cataloging in 3-D: Three-Dimensional Artifacts and Realia." Slideshow presentation. Last modified March 25, 2010. Accessed September 9, 2012. www.slideshare.net/enimsakont/cataloging-in-3d-threedimensional-artifacts-and-realia.

These workshop slides provide a complete walkthrough of cataloging 3D artifacts and realia. More than 120 slides, organized by area of description, convey information clearly. The full gamut of cataloging issues is covered, including all pertinent MARC tags, subject headings, choice of main or added entry, and detailed guidance on writing 5XX notes. Also included are instructions for choosing a workform and coding the fixed fields in OCLC's Connexion. Although several other online resources offer guidelines for cataloging realia, these workshop slides are more comprehensive, better suited to novices, and oriented for practical use.

Reproductions

Furniss, Kevin, and Morag Boyd. "Describing Reproductions:

A Series of Decisions." Slideshow presentation at OLAC Conference, Macon, Georgia, October 15, 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/DescribingReproductionsOLAC2010final.pdf.

These slides explain what reproductions are and which MARC fields to use for a variety of reproduction types: microforms, facsimiles, vendor neutral e-books, and other digital formats. However, microforms and facsimiles are covered in more depth than any other formats. In addition, two methods for cataloging reproductions are discussed: describing the original or describing the reproduction. Several slides are devoted to explaining the purpose and usage of MARC fields like the 533 (Reproduction Note), 534 (Original Version Note), and 775/776 (Other Physical Form Entry/Issued With Entry). What will be most helpful to catalogers are the numerous slides containing screenshots of full MARC records for each reproduction type. The tail end of the presentation looks at the implications of *RDA* and *FRBR* on cataloging reproductions, including a side-by-side example of MARC field changes between *AACR2* and *RDA*. Cataloging reproductions is fraught with challenges and these slides clarify much on the matter.

Serials

Lewis and Clark Library System. "Cataloging Serials." Last modified September 24, 2010. Accessed September 9, 2012. www.lcls.org/wp-content/uploads/2009/05/Cataloging-serials-2010.pdf.

This is one of the few resources for cataloging serials that is utilitarian and accessible to those who are unfamiliar with the format. It includes definitions for different types of serials and how to treat them bibliographically. Clarification is provided for cataloging problematic formats and choosing whether they should be cataloged as monographs or serials. Following these general guidelines is a complete walkthrough for each pertinent MARC field and area of description for serials. Lastly, the guide discusses which fields to edit when closing a serial record (when the serial ceases publication). This compact primer provides a quick and easy approach to cataloging serials.

Program for Cooperative Cataloging. CONSER—Cooperative Online Serials Program of the PCC. Accessed September 9, 2012. www.loc.gov/aba/pcc/conser/index.html.

CONSER, the Cooperative Online Serials Program of the PCC, is the authoritative source for serials cataloging. Although the *CONSER Editing Guide* and *CONSER Cataloging Manual* must be purchased, the CONSER website features numerous free resources related to serials cataloging.[20] It includes links to webinars, institutions and organizations associated with serials, instructions for joining the program, and other online resources for serials catalogers.

Information also is provided on the Serials Cataloging Cooperative Training Program (SCCTP) that offers training in serials cataloging and links to free training materials. This website provides essential information to any cataloger working with serials.

Program for Cooperative Cataloging. *Integrating Resources: A Cataloging Manual: Appendix A to the BIBCO Participants' Manual and Model 35 of the CONSER Cataloging Manual*, 2011 revision. Washington, DC: Program for Cooperative Cataloging, 2011. Accessed September 9, 2012. www.loc.gov/aba/pcc/bibco/documents/irman.pdf.

The 2011 revision was developed to update cataloging information on integrating resources and bring the information in line with the SCCTP workshop materials. The manual offers a thorough review of the characteristics of integrating resources and how they should be cataloged, based on *AACR2* rules, *Library of Congress Rule Interpretations*, and MARC fields. A list of references also is provided in the manual with links to useful information. The manual provides superlative examples of how to catalog different integrating resources, including digitized texts, electronic journals, databases, websites, and resources in loose-leaf format.

Special Collections, Rare Books, Manuscripts, and Archival Materials

Barrett, Marcia. "Cataloging for Special Collections, or, Since It's All about the Collections, Collection Level Cataloging." Slideshow presentation, OLAC Conference, Macon. Georgia, October 2010. Accessed September 9, 2012. www.olacinc.org/drupal/conference/2010/files/CatalogingForSpecialCollections.pdf.

These presentation slides serve as an overview of special collections cataloging. Information is given about the various types of special collections formats frequently encountered. Two approaches to cataloging are discussed at the outset: collection-level cataloging versus item-level cataloging. For those inclined to collection-level cataloging, the slides offer reliable examples of finding aids. Organized by *AACR2*'s areas of description, each section is illustrated with MARC record examples. Instructions for applying fixed fields and assigning subject headings also are present. The content on each slide is lean and succinct, making it a convenient reference for hands-on cataloging. Of unique importance are the detailed instructions for creating a variety of MARC 5XX notes. At the end of the presentation is an example of a special collections photograph with a walkthrough of its cataloging process and the completed MARC record for the photograph. Considering the dearth of online resources focused on special collections cataloging, these presentation slides are exceptional and vital to special collections catalogers.

Hildebrand, Ryan, ed. "RBMS Controlled Vocabularies." Rare Books and Manuscripts Section, Association of College and Research Libraries. Last modified January 11, 2010. Accessed September 9, 2012. www.rbms.info/committees/bibliographic_standards/controlled_vocabularies/index.shtml.

Developed by the Bibliographic Standards Committee of the Rare Books and Manuscripts Sections (RBMS) of the Association of College and Research Libraries, these controlled vocabularies or thesauri will be of special interest to rare materials catalogers. The thesauri can be browsed for binding terms, genre headings, paper-making terminology, printing, and publishing terms. Terms include scope notes describing their usage, cross-references, and term relationships, e.g., broader and narrower terms. The thesauri can be browsed from an A-to-Z list or retrieved using a search box. For the cataloger assigning specialized metadata to rare materials, these controlled vocabularies will be helpful.

Holzenberg, Eric, and Larry Creider. "Directory of Web Resources for the Rare Materials Cataloger." New Mexico State University Library. Last modified July 13, 2012. Accessed September 9, 2012. http://lib.nmsu.edu/rarecat.

This exhaustive directory is a portal to a wide-ranging assortment of resources concerning various facets of rare materials cataloging. The site provides general guidelines by the RBMS along with links to unique websites about special topics for rare books. Many reference tools are supplied to help with foreign languages and authority control matters that are unique to special collections. Entire groups of links also are devoted to early cartographic materials and medieval manuscripts. Other categories of links include the history of the book, watermarks and paper, bindings, and printing and publishing information. Lastly, this directory includes a selected list of digital libraries and library catalogs of interest to special collections cataloging. Although this directory is essentially a list of links lacking descriptive annotations, it provides a gateway to some of the best online resources available to rare materials catalogers.

Theses and Dissertations, Technical Reports, and Offprints

OCLC. OCLC Bibliographic Formats and Standards. "3 Special Cataloging Guidelines." Accessed September 9, 2012. www.oclc.org/bibformats/en/specialcataloging/default.shtm.

This segment of OCLC's Bibliographic Formats and Standards (BFAS) focuses on problematic materials and unusual cataloging considerations. The formats covered include theses and dissertations, reproductions, technical reports, original microform publications, offprints, integrating resources, and locally made videorecordings. The site also offers directions for creating "In Analytic" entries, institution-specific notes, and parallel records in different languages. Each section contains concise bullet-pointed instructions coupled with sufficient MARC examples. Because of its unique content, this portion of BFAS is of great value.

Miscellaneous Cataloging Resources

"*AACR2* Abbreviations (Roman Alphabet)." Yale University Library. Accessed September 9, 2012. www.library.yale.edu/cataloging/abbrev.htm.

This resource is an A-to-Z list of common bibliographic terms and their equivalent abbreviations. Drawing on the Roman alphabet abbreviations list in appendix B of *AACR2*, this list of terms in the Roman alphabet will be of tremendous help to the cataloger of foreign language materials. Although the resource does not give translations or definitions of the terms, it is useful for figuring out what a foreign language abbreviation means, for example, "Ausg." for Ausgabe.

Association for Library Collections & Technical Services. Task Force on an Appendix of Major and Minor Changes. Committee on Cataloging: Description and Access, Cataloging and Classification Section. *Differences between Changes within: Guidelines on When to Create a New Record*, revised edition. Chicago: ALCTS, 2007. Accessed September 9, 2012. www.ala.org/ala/mgrps/divs/alcts/resources/org/cat/differences07.pdf.

This document outlines criteria for catalogers to consider in determining whether to create a new record or to use an existing one. The descriptions, instructions, and examples are informative and easy to follow. In addition to an overview of the basic criteria, the document includes specific guidelines for single-part monographs, multipart monographs, integrating resources, and serials. Important information is reiterated in checklist charts, which makes this document ideal for quick review.

Bannerjee, Kyle. "The Cataloging Calculator." Library Technology Consultants. Accessed September 9, 2012. http://calculate.alptown.com.

The Cataloging Calculator generates Cutter numbers, codes, and similar information on the basis of a supplied search term. For example, typing the last name of an author and selecting the "LC Cutter" option will convert the name into a proper Cutter number. In addition to LC Cutter numbers, it calculates geographic Cutter numbers, geographic area codes, country codes, language codes, *AACR2* abbreviations, and MARC variable fields. Selection from a pulldown menu results in the display of the fixed fields for any of the format types and for authority records. All of the information populates instantly as terms are entered in the search box,

much like the "results as you type" feature of Google's search engine. The Cataloging Calculator is therefore an expedient and utilitarian source for constructing Cutter numbers, geographic codes, and other bibliographic metadata.

Internet Library for Librarians. "Abbreviations for Place of Publication in *AACR2* and as Postal Codes." Accessed September 9, 2012. www.itcompany.com/inforetriever/cat_260a.htm.

　　Here is a handy cheat sheet of the current United States postal abbreviations (e.g., TX) and their *AACR2* equivalents (e.g., Tex.). The traditional abbreviation for states is *AACR2*'s preference unless the current postal abbreviation appears on the item. Like the Cutter table, this is an essential reference for both beginning and experienced catalogers to bookmark.

Lewis and Clark Library System. "Contents Notes for 505." Last modified April 9, 2010. Accessed September 9, 2012. www.lcls.org/wp-content/uploads/2009/05/Contents-notes.pdf.

　　This tutorial covers the usage of both regular and enhanced contents notes. Although written as local guidelines, the information follows OCLC practice and includes copious MARC record examples. Instructions are given for recording contents notes for nonfiction, collective biographies, sound recordings, and music scores. General policies are provided for omitting certain terms, adding MARC 500 notes, 740s (Added Entry), and other cataloging decisions related to the 505 (Formatted Contents Note) field. Those seeking a detailed explanation of contents notes should find this resource beneficial.

Lewis and Clark Library System. "Dates in Bibliographic Records." Last modified August 20, 2010. Accessed September 9, 2012. www.lcls.org/wp-content/uploads/2009/05/DATES-IN-BIBLIOGRAPHIC-RECORDS-revised.pdf.

　　Multiple publication, reprint, and copyright dates on a single item may pose a challenge to the cataloger when determining which date or dates to include in the bibliographic record. This resource conveniently assembles instructions for inputting dates in variable and fixed fields of bibliographic records. It presents an extensive list of MARC examples for a variety of situations involving the recording of dates, such as for copyright renewals, printing dates, reprint and reissue dates, and production dates. Considerations are made for specific formats like sound recordings, audiobooks, playaways, videorecordings, electronic resources, and realia. In cases when recording the date is challenging, this resource is an invaluable aid.

Library of Congress. "ALA-LC Romanization Tables." Accessed September 9, 2012. www.loc.gov/catdir/cpso/roman.html.

　　Here is LC's archive of Romanization tables for sixty-one languages. The tables provide guidance for proper transliteration into Latin script, including full alphabetical listings of characters and their Romanization equivalent. Many tables include additional information on vowels, diacritics, lower and upper case transliterations, and other special grammatical considerations. Most of the tables have been updated in 2011 and 2012. This resource will be useful for any cataloger dealing with materials in foreign languages that utilize non-Latin script.

Library of Congress. "Library of Congress Online Catalog." Accessed September 9, 2012. http://catalog.loc.gov.

　　The LC online catalog provides users with a variety of ways to search LC for bibliographic records. Two options for searching are available. The first is a basic search and by subject, keyword, title or author/creator, call number, and LCCN, ISSN, or ISBN. The Guided Search option allows users to use keyword searches, Boolean operators, and searching by a particular index. Search tips are provided for both a basic search and a guided search, with results ranked by relevance. Results can be reviewed differently by using display tabs for brief record, subjects/content, full record, and MARC tags. Bibliographic records retrieved can be saved, printed, and emailed. A five-minute session timeout display can be seen in the lower-left-hand corner of the screen, letting the user know how much time remains before a bibliographic search is ended.

Library of Congress. Network Development and MARC Standards Office. "Appendix F—Initial Definite and Indefinite Articles." www.loc.gov/marc/bibliographic/bdapp-e.html.

　　This section of LC's MARC Standards lists common initial definite and indefinite articles in a variety of languages. Although no translations are provided, the list helps catalogers identify which words are articles. Each article is labeled with the language that utilizes it; for example, "den" is used in Danish, German, Norwegian, and Swedish. Catalogers of foreign language materials will be drawn to this resource as its practical value is evident: the list helps the cataloger know if the first word in a title is an initial definite or indefinite article, which aids in applying correct filing indicators.

OLAC Cataloging Policy Committee. "Summary/Abstracts Task Force. Summary Notes for Catalog Records." Last modified August 2002. Accessed September 9, 2012. www.olacinc.org/drupal/?q=node/21.

　　Not much guidance can be found on writing summary notes for electronic resources, websites, realia, sound recordings, moving image, and archival materials. This resource, however, is one of the few to offer reliable examples of summary notes, as well as bulleted instructions for writing notes for items in a variety of formats. Examples of

complete MARC 520 (Summary, etc.) fields are supplied with clear headings designating the applicable format. In addition, a large appendix of summary note examples and a bibliography are provided for further reference. Since the fundamentals of writing summary notes have not changed much over time, the guide remains current despite its age.

Sha, Vianne T. "Ending Punctuation for Bibliographic Data." Last modified December 13, 2000. Accessed September 9, 2012. www.itcompany.com/inforetriever/punctuation.htm.

Organized in numerical MARC field order, this webpage presents examples of proper punctuation and order of subfields for each variable MARC field. Bulleted scope notes clarify which punctuation is significant for a particular field. Although similar information can be found on OCLC's *Bibliographic Formats and Standards* or LC's MARC Standards, this is a convenient one-page list for quick reference. Contrary to the statement at the top of the page that the list is no longer maintained as of 2000, it was revised in 2009 to incorporate genre headings.

Sutch, Susan. "Seven Cataloging Steps Cheat Sheet." Last modified 2006. Accessed September 9, 2012. http://infopeople.org/sites/all/files/past/2006/beyond/Hand_2/steps_cheat.pdf.

The steps outlined in this guide are a handy checklist for entering the main entry, notes, subject headings, as well as variable fields for an assortment of formats. What makes this seemingly rudimentary resource special, especially for beginners, is the table on the first page listing the chief source of information for all formats. This table is invaluable to both novices and veterans who may be unfamiliar with cataloging a particular format; it is a convenient alternative to consulting *AACR2* for a clear answer about the chief source of information.

RDA

American Library Association, Canadian Library Association, and CILIP: Chartered Institute of Library and Information Professionals. RDA Toolkit homepage. Accessed September 20, 2012. www.rdatoolkit.org.

Although the *RDA Toolkit* is a subscription service, the website itself offers access to presentations, documentation, and links to free *RDA* resources via the "Teaching & Training" page. One notable resource from this website is the Library of Congress Policy Statements (LCPS) found on the "Resources" tab of the "Access RDA Toolkit" webpage. LCPS is essentially the successor to the *Library of Congress Rule Interpretations*, and is made available at no charge.

Bothmann, Bobby. "Cataloging Electronic Resources Using

RDA: RDA 201." ALA Connect. Accessed September 19, 2012. http://connect.ala.org/files/Cataloging%20Electronic%20Resources%20with%20RDA.pdf.

Created by an authoritative expert on the subject, this presentation centers on common issues related to cataloging electronic resources using *RDA*. It walks through the areas of description affected by *RDA*, identifies the core elements used for electronic resources, and includes numerous MARC examples. Supplementary slides with full MARC record examples and screenshots of preferred sources of information can be found here: http://connect.ala.org/files/Cataloging%20Electronic%20Resources%20with%20RDA%20Examples.pdf.

Griggs, Karen, and Pam Grace. "AACR2 to RDA for Audiovisual Catalogers." Utah Library Association. Accessed September 19, 2012. http://ula.org/sites/ula.org/files/2011conference/pam%20powerpoint4-additions.pptm.

This presentation offers a simple and focused look at cataloging audiovisual materials with *RDA*. Introductory content outlines the major changes occurring under *RDA*, while the bulk of the presentation supplies detailed MARC examples for DVDs, streaming videos, sound recordings, and playaways. These examples employ color-coded font to indicate the RDA elements.

Joint Steering Committee for Development of RDA. "RDA: Resource Description and Access Presentations on RDA." Accessed September 19, 2012. www.rda-jsc.org/rdapresentations.html.

This page from the Joint Steering Committee (JSC) for the Development of RDA website is a compilation of presentations made by JSC members and others involved in *RDA* development since 2007. The list serves as an index of presentations with name of presenter(s), location, and conference name, along with links to the presentation materials. Topics covered in the presentations include basic introductions to *RDA*, *FRBR* theory, changes from *AACR2* to *RDA*, and even *RDA*'s impact on various formats. Most of the presentations are issued by authoritative figures in the *RDA* and cataloging community.

The Library of Congress. Resource Description and Access (RDA) Information and Resources in Preparation for RDA. The Library of Congress Cataloging and Acquisitions. Accessed September 19, 2012. www.loc.gov/aba/rda.

Library of Congress' *RDA* website is naturally a vital resource for keeping up to date with *RDA*. It includes official documentation and news, webcasts, training modules, and *RDA* examples. The website also is a gateway to the Catalogers Learning Workshop page, which offers a wealth of training materials concerning bibliographic and authority record creation under *RDA*.

Maxwell, Robert L. "RDA: Resource Description and Access in Depth: Differences between AACR2 and RDA." Joint Steering Committee for Development of RDA. Accessed September 20, 2012. www.rda-jsc.org/docs/RDA_part_2_201005.pdf.

Maxwell's presentation slides explore the differences between *AACR2* and *RDA* through simple MARC examples and explanations of *RDA* rules. The scope of this resource is detailed and extensive. All areas of description are thoroughly covered, in addition to definitions of RDA terminology, concepts (creators, entities, relationships, etc.), new MARC tags, and practices concerning access points.

North Carolina State University Libraries. RDA. NCSU Libraries Intranet. Accessed September 19, 2012. https://staff.lib.ncsu.edu/confluence/display/MNC/RDA.

North Carolina State University (NCSU) was one of the *RDA* test libraries and is providing its documentation, training materials, presentations, and other resources to the cataloging public. Among the materials made available are NCSU's test records and workforms representing a wide array of formats.

Paradis, Daniel. "Significant Changes for Cataloging Music: AACR2 vs. RDA." Joint Steering Committee for Development of RDA. Accessed September 20, 2012. www.rda-jsc.org/docs/10_3_24_MLAannmtg_SignificantchangesforcataloguingmusicAACR2vsRDA.pdf.

The presentation reviews the impact of *RDA* on cataloging scores and sound recordings. It consists of four sections summarizing *RDA* changes to glossary terms (e.g., score definitions), description, choice of access points, and uniform titles. Descriptive cataloging topics include replacement of the general material designation (GMD), differences in recording date, publisher numbers, and the physical description of scores and sound recordings. The presentation also clarifies choice of access points for adaptations, libretti, and cadenzas, along with an extensive look at uniform titles under *RDA*.

Schiff, Adam. "Welcome to the Home Page for Adam Schiff." Accessed September 19, 2012. http://faculty.washington.edu/aschiff.

Schiff is a recognized authority on interpreting *RDA* and filtering information for every-day catalogers. Schiff's website lists several versions of slides from his important two-part presentation, "Changes from AACR2 to RDA," which compares descriptive cataloging and MARC coding differences between *AACR2* and *RDA*. Addressing all areas of description, these presentation slides offer straightforward rule-by-rule comparisons with *RDA* changes designated in red font. The way this *RDA* information is presented makes it ideal for the visually oriented learner or the cataloger wanting quick answers about descriptive cataloging under *RDA*.

Tillett, Barbara. *What Is FRBR?* Washington, DC: Library of Congress Cataloging Distribution Service, 2004. Accessed September 19, 2012. www.loc.gov/cds/downloads/FRBR.PDF.

Barbara Tillett's brochure is an introduction to *Functional Requirements for Bibliographic Records* (*FRBR*). Tillett is a well-known figurehead of the International Federation of Libraries and Institutions (IFLA) and an expert on *FRBR* and *RDA*. This brochure defines *FRBR* concepts and terminology, provides illustrations of its theoretical models, and explains what impact it can have on cataloging rules, bibliographic structures, and systems design and applications.

University of Chicago Library. "Resource Description and Access (RDA) Testing at the University of Chicago Library." University of Chicago Library Staff Web. Accessed September 19, 2012. www.lib.uchicago.edu/staffweb/depts/cat/rda.html.

This website contains *RDA* resources used by the University of Chicago, one of the *RDA* test institutions. Among their unique documentation are local policies and decisions, procedures for changing *AACR2* records to *RDA* records, MARC record examples, and University of Chicago presentations on *RDA*.

Conclusion

Although this webliography is intended to reflect current and continuously updated resources, nothing guarantees that they will remain so forever. Because of the fluctuating nature of online content, some of these resources are bound to change or even disappear in the future. Broken links are the result and this webliography is not immune from them. Despite this reality, the authors believe they have chosen stable resources that, from all indications, will continue to be hosted and updated in coming years. These free online cataloging tools should continue to serve as practical guides for catalogers.

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M. Russell and Jodi Lynn Spillane, "Using the Web for Name Authority Work," *Library Resources & Technical Services* 45, no. 2 (2001): 73–79.

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Notes on Operations

Technical Services Transparency

Using a LibGuide to Expose the Mysteries of Technical Services

Jennifer W. Bazeley and Becky Yoose

Technical services departments in academic libraries have long struggled to communicate effectively with other library departments, particularly public services departments. As academic libraries acquire large numbers of digital resources, technical services departments are increasingly responsible for providing current information about those resources to public services staff. The authors of this paper describe the process of creating, testing, and implementing LibGuides (proprietary software for building library portals and facilitating information sharing in libraries) as a new way of communicating much-needed information between technical services and public services staff at Miami University Libraries.

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Academic libraries now provide patrons with large numbers of electronic resources. As the number of resources grows, so does the potential number of breakdowns in access. This potential for problems means communication is vital between the technical services staff who manage these resources and the public services staff who interact with patrons.

The *Oxford English Dictionary* defined communication as the transmission or exchange of information, knowledge, or ideas by means of speech, writing, mechanical, or electronic media.[1] Technical services units often seek to use their departmental documentation, which was originally intended for others within the department, to reduce communication barriers between the library staff who work on the public side of the organization and technical services. While a card catalog and a binder filled with typed procedures used to suffice, technical services staff now must document and communicate information about thousands of resources managed in dozens of different tools. The challenge for technical services units is to find successful ways to communicate pertinent information with all library staff in a rapidly changing technological environment. Examples of information needed by public services staff are how to access e-books and how to report electronic resource access issues.

At Miami University Libraries, the authors of this paper (at the time of the project design and implementation, they served as the bibliographic systems librarian and the electronic resources and serials librarian) sought a new approach to the challenge of documenting and conveying important information to staff outside of the technical services department. Their solution was to choose a platform already familiar to public services staff, LibGuides (http://springshare

.com/libguides), a web-based application primarily used by librarians for creating subject-specific guides to facilitate patron research. While some libraries may not utilize LibGuides, the process of developing content and implementing a tool for interdepartmental communication would be similar regardless of the specific platform used, thus being of value for all libraries. This paper addresses the use of LibGuides as an interdepartmental communication tool and will discuss design considerations, planning and implementation, content and scope, and reflections on the experience.

Literature Review

Library documentation has received some attention in the literature, particularly in relation to technical services departments. White's 2005 article provides a solid framework for the importance of technical services documentation.[2] She defined documentation as "anything written down in a department that pertains to the present, past, or future operation of the library and can assist in clarifying and confirming the nature of library activities."[3] White stated that library staff tend to rely on institutional memory instead of documented policies and instructions. When staff members retire, the part of the department's history that they experienced may leave with them. When a department relies on institutional memory, documentation is not seen as a priority in day-to-day operations. Documentation prevents this particular form of information loss. White emphasized the importance of the regular review and update of documentation to maintain currency and accuracy. She also discussed the need for this documentation to be shared with staff outside of the technical services department. Sharing documentation reduces workflow inconsistencies between departments and may reduce

time-consuming questions about policy and procedure. White pointed out that a clear record of technical services activities help staff outside of technical services operations in understanding what work is performed in the department.

Academic libraries are increasingly using online tools and applications to record their documentation and relay that information to other library staff. A substantial corpus of library science literature addresses the use of tools such as intranets, blogs, and wikis for documentation and communication in libraries. While many examples of these tools and applications can be found in the literature, few present interdepartmental examples. Most of the examples fall into two categories: the tool is used for a single, very specific purpose or process, or it is used to facilitate staff communication and documentation across many departments or an entire library system.

Mphidi and Snyman wrote about the value of intranets in academic libraries in general.[4] They defined an intranet as "a network that uses Internet concepts and technologies within an organisation in order to be accessed by employees to share knowledge. In addition, such knowledge is stored electronically and access is usually controlled by password."[5] They discussed previously published literature that identified numerous key elements in using an intranet, including consistency, interactivity, ease of use and simplicity of interface, low cost, centralization, flexibility, and timeliness or currency of information. Mphidi and Snyman emphasized that information on the intranet must be up-to-date and must be relevant to those who use it.

Many libraries have adopted blogs as an internal means of communication. Pan, Bradbeer, and Jurries wrote in 2011 about the blog that their library at the University of Colorado Denver Auraria created to help in communicating and resolving electronic resource access problems.[6]

At their institution, a team of three librarians customized a blog to address both managing electronic resource issues and communicating those issues to others in their library. The staff members were responsible for posting information on the blog and organizing it while members of the public and other library staff could read the blog or search it for specific issues. Pan, Bradbeer, and Jurries identified attributes of an effective blog as centralization, ease of use, and low cost.

According to articles by Costello and Bosque and by Yoose, wikis are webpages edited collaboratively through the use of software that allow for user-friendly editing through an interface that does not require knowledge of HTML.[7] Few articles have addressed technical services departmental wikis. One exception described the university libraries at the University of Nevada, Las Vegas, which employed both wikis and blogs for library-wide communication. Costello and Del Bosque surveyed staff using these tools and observed that the staff wiki's success "may be in part because of the nature of the information stored on it, which can be essential to the operations of the libraries, particularly in regards to procedural information."[8] They also noted that "the study showed that despite both wikis and blogs being fairly easy to use, technology challenges still impede their complete adoption. . . . Staff were much more comfortable using blogs and wikis to receive information than to post it."[9] Ease of use is a major factor in the success of intranets and other communication tools.

Library wikis, like intranets and blogs, are more effective when they are easy to use (though with some caveats in the case of wikis), the information is relevant, and the information is current. In 2008, Murray wrote about using blogs, Google Docs, and wikis as an alternative to using an electronic resource management system.[10] He discussed the role that each of these

technologies might take in the management of electronic resources and his ideas for use cover a larger portion of the lifecycle of electronic resources in an academic library. He noted that blogs offer the advantage of having an integrated archive feature, which, along with the use of labels, allows for simplified searching of past posts. Google Docs spreadsheets are useful because they can be shared between many staff and edited by many staff simultaneously. They also allow for administrative control by users who may not need to edit a document, but only to view it.

Not much literature discusses the use of a LibGuide for anything other than its intended use of creating subject guides. However, England and Fu reported the use of LibGuides for a single specific library process.[11] They used a LibGuide at the University of Maryland University College library to manage the regular evaluation of their electronic resources. England and Fu noted aspects of the LibGuides software that made it highly desirable for use with electronic resource evaluation:

> The embedded Web 2.0 features of LibGuides were considered a good fit for managing the diverse tools of electronic resources. . . . We could post content from the Web and from our homegrown ERMS; embed videos, RSS, and podcasts; customize the look and organization; add widgets and APIs; and distribute content and services. . . . The format was flexible enough to effectively organize disparate resources, tools, and staff into a single site that could show the interconnectivity of all of these.[12]

The literature indicates that many libraries have benefited from the use of intranets, wikis, and blogs for documentation and communication within the library.

Local Environment: Miami University Libraries

Miami University Libraries employs forty-two degreed librarians and fifty part-time and full-time staff. The library system is comprised of a main library, an art and architecture library, a music library, and a science library. Of the ninety-two library employees, twelve library staff (five librarians and seven classified staff) work in a centralized technical services department and are responsible for the acquisition, organization, and maintenance of library resources. Teams within technical services include acquisitions, cataloging, processing, preservation, electronic resources, and serials. The remaining eighty library staff work in archives, library systems (information technology), digital collections, special collections, and public services (circulation and reference staff).

Historically, individual technical services staff were responsible for communicating relevant information and documentation to library staff and departments outside the technical services department. For example, the technical services staff member in charge of electronic resources (e-resources) was responsible for communicating e-resources access issues to library staff outside technical services. Most communications were exchanged in emails between individual technical services staff and staff in other departments. This frequently resulted in inefficiencies and duplicated workflows and increased the spread of misinformation. To create consistency and centralize communication, the electronic resources and serials librarian and the bibliographic systems librarian took on the role of project leaders in designing, creating, and implementing a new tool for interdepartmental communication.

Design Considerations

The Miami University Libraries' technical services department was not interested in creating a tool for use by all staff across the library system or in providing a tool for managing electronic resources (the Miami University Libraries already had an electronic resource management system in place). Instead, the department wanted to implement a tool that could communicate information from technical services staff to public services staff in a user-friendly way. In addition, the tool needed to provide current information about projects, procedures, and problems related to all technical services work in a variety of formats. Before building this tool, however, the project leaders had to address several design considerations.

Communication

The project leaders decided that the primary audience for this tool was the staff who work on the front lines of the Miami University Libraries—those who interact with faculty and students at the information desk, on the phone, and through email and chat reference. These are the people who receive questions about the Libraries' resources, receive problem reports most frequently, and teach bibliographic instruction classes for students. These staff members are integral in passing information about the library resources to patrons. The project leaders, along with the rest of the technical services department, wanted to open a line of communication with these frontline library staff that was both efficient and comprehensive.

The project leaders then explored the best means of communication with the intended audience. In previous years, the most common way of disseminating information to library staff was through mass emails to several in-house electronic discussion lists

maintained by the Miami University Libraries. These lists had been only moderately effective for several reasons. First, each list targeted a specific subset of library staff and these arbitrary subsets did not always include all of the staff who needed a given piece of information. Because of the complexity of the electronic discussion list system and lack of documentation regarding the details, remembering which list served the relevant subset of staff was difficult. This made dissemination of information a haphazard process. In addition, information overload from a combination of email messages, social media, and print mailings both within institutions and from professional affiliations has become normal. Processing all of the information that is received each day is challenging and overlooking something important is easy. Few staff members are able to monitor their email continuously, which means that an email message might not be read until after its usefulness has expired.

Email is not an efficient way to track electronic resource problems and solutions. When troubleshooting an electronic resource problem, analyzing patterns or trends is often helpful. While most email clients have excellent organizational features, information is not stored in a way that supports easy retrieval and analysis. Important information may exist only in one staff member's inbox and is not accessible to others working on the same problem. All these considerations pointed to the need for a communication tool that would bring important information to the attention of the intended audience and be openly accessible and searchable.

Content

Although the technical services department had recently revised and organized its information on the wiki, the department decided that opening that tool to the rest of the Libraries would not be the best solution. The information on the wiki would not help the frontline staff in their day-to-day operations. The intended audience for the technical services wiki is the technical services department, and the structure, tone, and content is tailored to an audience that works with or is intimately familiar with the system codes, jargon, and general workflow of the department. To a staff person outside of that department, the information presented does not have the needed context to aid understanding in what the information means. In addition, an intradepartmental website has information that is not needed by the staff person outside the department; the noise-to-signal ratio would not be conducive to efficient information retrieval and understanding. Following these guidelines gave the project leaders a better focus on what information to provide and in what context to provide it.

Technology

The last major consideration was the appropriate technology to use for the communications tool. Many possibilities were available beyond the email and spreadsheets previously used. The department, along with the Miami University Libraries, had several existing platforms from which to choose. For example, the Libraries use Drupal, an open-source content management system (CMS), for content management, and the department could build a technical services site on top of the existing structure. The Libraries also host wikis and blogs, and use Blackboard, the campus' CMS.

Departmental staff skills heavily influenced which platform to use. For the tool to be successful, it needs to be frequently updated by several departmental staff members with varying skill levels. Flexibility and ease of use are key characteristics in an ideal platform that will be maintained by a limited number of departmental staff.

Planning and Implementation

Because the Miami University Libraries' website and catalog are both run by Drupal, building a proof-of-concept version of the communication tool using Drupal version 6 was attractive. In January 2010, the bibliographic systems librarian created a Drupal mockup of the communication tool containing two pages: a blog for electronic resources updates and information and a form, using the Webforms module, for reporting electronic resources access issues. The most recent blog entry, along with other blog entries from various other Rich Site Summary (RSS) feeds, displayed on the front page, with the intention of turning the homepage into a dashboard, where people could see the most important, up-to-date information on the front page.

After a month of customization and testing after the initial configuration of Drupal mockup, the bibliographic systems librarian determined that the long-term maintenance of a similar production instance would require more time and resources to properly maintain the tool than first expected. In addition, the technical services department had only one person with experience in creating and maintaining a Drupal site. Having a single person with Drupal skills in the department meant that one person would be responsible for all changes, a situation that the project leaders wanted to avoid. If that person were reassigned to another project or moved to a different department, then control of the Drupal site would shift outside of the technical services department. Losing the departmental autonomy of the website would be undesirable.

Meanwhile, the public services Department had recently licensed LibGuides and migrated their research guides to the new platform. Several public services librarians, aware of the technical services department's

interest in creating a communication tool, suggested that the department look into LibGuides as a possible platform. Some public services librarians had concerns about using LibGuides for a purpose other than research guides. After discussion in the LibGuides Task Force about this possible nontraditional use of LibGuides, the task force approved the plan and the project leaders received LibGuide accounts in February 2010. Within two days, the bibliographic systems librarian built a second mockup using LibGuides, mimicking the layout used on the Drupal mockup. Although Drupal had most of the functionalities the department wished to include in the tool, the flexibility of LibGuides allowed for better integration of third-party services. Most technical services staff had the skills needed to set up most of the mockup. The week after the LibGuides mockup was created, technical services staff compared the two mockups and overwhelmingly chose LibGuides as the platform.

The mixture of native functionality in LibGuides and the ease of integrating third party applications within it gave the department room to provide a variety of services. The technical services LibGuide integrates three external applications: WordPress, planet toc, and Google Docs. Each provides a different line of communication and service. The pages and tabs help make these services clearly identifiable to staff and give a clear, designated place for certain types of information.

By March 2010, the technical services LibGuide was close to completion. The authors solicited feedback from other technical services staff and a few public services staff. In addition, the project leaders met with various library departments in March to introduce the LibGuide site to staff, explain the site's broad goals, and demonstrate the site, showing what information was included and how the forms worked. The meetings resulted in constructive feedback and the technical services librarians modified the LibGuide site with that feedback in mind.

The LibGuide site was formally launched in early April 2010 to all library staff. Most of the initial training was through email, because most staff already had experience navigating and using LibGuides for other work purposes. During that summer, staff were given a transitional period during which both the older email method and the new LibGuide were used to communicate. This allowed staff some time to adjust to getting their information from the LibGuide. By September 2010, the technical services department stopped sending system-wide email with the exception of urgent and emergency messages, opting to post most of the information on the LibGuide instead.

Technical Services LibGuide Elements

Homepage

The homepage (see figure 1) has seven elements. Using the RSS feed block on LibGuides, the general RSS feed from the technical services department WordPress blog is fed into the homepage under the heading "TS News" and shows the last five blog entries. This joins five other RSS feeds:

- "ER News," a feed for items tagged with the acronym "ER" (for electronic resources) on the blog
- "ER Free Trials," a feed for blog posts tagged with "trial" for trials of new electronic resources
- "OhioLINK Blog," a feed from the OhioLINK (an Ohio library consortium) blog
- "Fund Activity Report," a feed with updates from the latest fund activity report generated by the integrated library system
- "Recent LIS Journal Articles," a feed from a locally hosted ser-

vice called planet toc, which alerts library staff to recently published issues of library and information science (LIS) journals

The feedback is the seventh element on the homepage. It offers a place for users to submit suggestions about the LibGuide.

Planet toc is a local meta feed aggregator service using the planet venus fork of planetplanet (www.planetplanet.org), a RSS feed aggregator used to create a RSS feed from a group of individual RSS feeds (an example of a planetplanet feed is Planet Cataloging). The planet toc feed is the electronic table of contents service for library journals that the department previously routed to library staff. Most of the routed print journals also were available online in full text without embargo. Switching to an online table of contents delivery system freed staff time once spent in preparation of routing physical journals. Additionally, it ensured that all library staff had simultaneous access to the latest library publications in a timely manner, instead of waiting for a physical issue routed from one person to the next. To build the meta-feed, the department created RSS journal alerts for those journals available through EBSCO's Library and Information Science and Technology Abstracts (LISTA) with full-text database or used existing RSS feeds from publisher websites and fed them into planet toc. While the homepage features all subscribed library and information science journals, staff also have the option to subscribe to individual title feeds from a link to the planet toc page.

Tabs

Tabs that run across the top of the screen link to additional resources, including general information, updates, and special projects. While the initial launch of the LibGuide had

Figure 1. Miami University Libraries Technical Services LibGuide Homepage with Tabs

a single row of tabs, the growth of the LibGuide is evident by the addition of multiple tab rows. Some tabs have a dropdown menu that directs the users to pages under that tab's topic, but most tabs consist of a single page.

Who's Who Tab

Because of recent changes in personnel and departmental structure in the technical services department, many library staff were uncertain who to contact regarding specific questions or issues. The "Who's Who" page lists staff under categories for easier navigation. Staff members outside of Technical Services can choose from a list of common issues (catalog record errors, for example) rather than an alphabetical list of people. Each category has a primary contact and a secondary contact (with the exception of the manager category).

Electronic Resources Access Issues Form and Status Update Tabs

A main feature of the LibGuide deals with electronic resource issues. This feature, split into two tabs, uses Google Docs spreadsheets for both the submission of electronic resources issues to the technical services department and the presentation of status updates

on those reported issues. One tab contains the form to report both local and consortial (OhioLINK) electronic resource issues. The form, built with Google Docs forms, is modeled after the OhioLINK electronic resource issues reporting form, with which many staff are familiar. The form has a core set of required fields, such as name of reporter and description of the error, and optional fields, such as the email address of the patron if he or she wishes to be contacted when the issue has been resolved.

On submission, the form data populates a Google Docs spreadsheet that automatically notifies the electronic resources and serials librarian, bibliographic systems librarian, and government documents librarian via email each time a new entry is submitted. Extra columns were added to the end of the existing form columns to help with internal workflow. One column indicates the person who is working on a particular issue, and the notes section documents steps toward issue resolution. The usual procedure when a notification email arrives in the inbox of the above three librarians is to check the spreadsheet, see if the issue has been reported before, and then note who (if anyone) has taken on the problem. Issues reported to the spreadsheet generally are claimed within one hour.

A separate Google Docs spreadsheet embedded in another tab of the LibGuide records information about the e-resource problem and steps toward resolution. Data elements in the spreadsheet are date reported, name of resource, type of problem, and updates on resolution status. When the problem is resolved, the librarian assigned to that problem changes the row color from red to green, providing a visual cue to distinguish between resolved and ongoing problems.

Report Request Form Tab

Another way the technical services

department uses Google Docs forms is to handle requests from staff for integrated library system (ILS) reports used for various purposes, including collection analysis and weeding. The form includes fields for staff to enter information about location codes and detailed information about what they want to output in the report, ensuring that technical services staff members can run the reports with minimal follow-up. The report form is set up in the same manner as the Electronic Resource Issues form so that an automatic email notification is sent to the same three librarians (i.e., electronic resources and serials librarian, bibliographic systems librarian, and government documents librarian) when a request is submitted. The turnaround time for report requests are a few hours, depending on staff availability and complexity of the report requests.

Policies Tab

The "policies" tab provides staff quick access to the gifts policy, serials policies, and public presentation rights policies. The gifts policy recently changed to accepting only gifts-in-kind and having the updated version posted made it easier for public services staff to reference when talking to potential donors. This part of the LibGuide is the least populated at the moment, but the department plans to grow this section as staff request additional policies to be posted.

Ebrary PDA Reports Tab

The first project to be featured in the LibGuide was the Libraries' patron-driven acquisition (PDA) electronic book (e-book) project with ebrary. This project generates weekly usage and purchase reports, which many staff are interested in downloading for further analysis. Rather than sending spreadsheets attached to email each week, technical services staff saved the report spreadsheets in Google

Docs spreadsheets and embedded the spreadsheets on the LibGuide. Each week the electronic resources and serials librarian receives an updated report from the vendor and updates the spreadsheets and the LibGuide. Library staff can go to the LibGuide tab at any time to view the embedded spreadsheet and download it into Microsoft Excel for further analysis.

E-Books Tab

Public services staff gave positive feedback about the "Ebrary PDA Reports" tab and indicated that they wanted more information about e-books in general. In response to the public services staff requests, a tab, "E-Books," was added for general e-book information. Technical services staff presented an internal cross-training session to public services staff regarding e-books at the Libraries using the LibGuide as part of the presentation. This tab offers information, mainly ordering and access, about e-books broken down by source.

Serials and Databases Tabs

The "Serials" tab was created to communicate differences between locally and consortially purchased serials and specific details about changes in this content that occur throughout the year. The most common questions technical services staff receive are about changes in serial publications. Serials staff track changes in serial format, title, and publisher throughout the year in a spreadsheet that is made available via a Google Docs spreadsheet and linked from this page. Lists of canceled titles from recent serials reviews also are available for downloading. Additional boxes provide details about consortially purchased serials, including title lists by publisher and whether these resources are leased or purchased.

The "Databases" tab is formatted like the "Serials" tab and includes information about significant events, such as large-scale platform changes. These types of changes frequently generate questions, and this tab allows space for all necessary details. Below the listed changes is a link that allows staff to download a spreadsheet of the Libraries' redirect URLs (shortened, stable URLs that are generated in-house for databases in the Libraries' A-to-Z list). Clicking this link is more efficient than contacting someone in the technical services department and waiting for a response. In addition to URLs, technical services staff also added a box with general information about the proxy server, as librarians frequently ask how to set up a resource for off-campus access. Because so many databases now offer the ability to create individual search boxes (widgets) for placement on a website or LibGuide, technical services staff also created a box with widget information for specific databases.

The Miami University Libraries performed a serials review in 2011; this was an ideal project for inclusion on the LibGuide. The review was conducted through a locally created online serials review tool, but the tool required instruction before use. This led Technical Services staff to create a page under the "Serials" tab that offers details on how to use the custom review tool and describes the type of information it contains. Because the tool included COUNTER (Counting Online Usage of Networked Electronic Resources) compliant usage reports, the electronic resources and serials librarian added general information about COUNTER reports to the page. After the review started, the authors realized that the difference between journal content provided by aggregators versus content purchased on a title-by-title basis was going to be a recurring question from staff, especially public services librarians. Subsequently, the electronic resources and serials librarian added this information to the page to facilitate staff understanding of the type of titles that were under review. After the Libraries completed the serials review process, the electronic resources and serials librarian posted links to lists of final cancellation decisions for download by library staff.

E-Resource Usage Stats Tab

The technical services department is frequently asked by librarians for usage reports for electronic resources. The library is experimenting with a commercial product for usage reports, but in the interim, the department is using its LibGuide to post links that allow downloading of spreadsheets of usage statistics for most vendors and platforms. The usage statistics are saved as Google Docs spreadsheets, which allows for the creation of links that will open the spreadsheets in Excel. While creating this statistics page, the electronic resources and serials librarian discovered an add-on for Excel called OffiSync, which made updating multiple spreadsheets simpler. OffiSync for Google Apps is no longer available, but Google Cloud Connect (https://tools.google.com/dlpage/cloudconnect) for Microsoft Office is a viable and free alternative to the OffiSync solution. These add-ons allow a user of both Word and Excel products and Google Docs to save a document simultaneously in both places. Because the usage reports for each vendor generally are received in Excel format, this tool allows staff to save each month's updates in Excel, which then simultaneously updates the Google Docs spreadsheet version used in the LibGuide.

Open Access Tab

In October 2011, Miami University Libraries celebrated "Open Access Week" with an awareness campaign for both library staff and patrons. Librarians who worked at public service points had questions about how to handle open access (OA) inquiries

during that week and about the specifics of the awareness campaign. Technical services staff decided to post general information on the LibGuide as a more efficient method to answer staff questions. In addition to information about open access materials in the library's own collections and catalog, the "Open Access" tab also provides specifics of the awareness campaign.

Marketing and Growth of the LibGuide

The technical services department discovered that the best method of drawing staff to the site is to populate it with high-demand information or frequently requested information about ongoing projects. Much of the content added to the LibGuide after implementation grew out of a need to help library staff understand the content the department purchases and different projects that affect staff beyond one department. For example, the electronic resources and serials librarian started the "E-books" tab in September 2010 after public services staff requested general e-book information. In January 2011, the project leaders gave an orientation and feedback session during a regularly scheduled cross-training session. Giving the session allowed technical services staff to demonstrate the guide to a large number of librarians simultaneously and removed some of the confusion surrounding e-books. This session served as an informative overview of the different ways the library incorporated e-books from different sources and advertised the availability of this information on the LibGuide.

Feedback and Assessment of the LibGuide

Feedback about the LibGuide, its contents, and possible uses came from library staff in both public services

and technical services and in a variety of formats. The bibliographic systems librarian included an online feedback form for library staff to submit feedback and suggestions while building the homepage of the LibGuide. The form only received two entries; most feedback about the LibGuide came via other venues. The technical services staff, including the project leaders, received suggestions for additional information and tabs through email and in person. The in-person feedback occurred both in structured and informal settings. The structured sessions were informational presentations about the LibGuide in which time was set aside for discussion and feedback. These presentations took place in both departmental meetings and in cross-departmental meetings to capture most of the intended audience of the LibGuide. In addition, library staff have approached the project leaders and other technical services staff informally with feedback about the LibGuide.

Assessment of the LibGuide has been an informal process because of time and staffing constraints. The project leaders have relied primarily on feedback from staff that have used the guide. Since the launch of the guide, several staff members have requested that specific information be added to the guide. The project leaders see this as a positive indication of use by staff. Additionally, the LibGuides software provides page view statistics. Since March 2010, the homepage has consistently had the most page views compared to the tabs in every month. While all of the tabs have seen use, the tabs with the most pages views are the "ER Issue Tracking" tab, which provides the electronic resources access issues form and status update tabs; the "E-Resources Usage Stats" tab, and the "E-Books" tab. The "Policies" tab received the least number of views during the same period. This is likely because the individual policies under the "Policies" tab were

well established and have not changed since the guide was created. Given the changing nature and increasing predominance of electronic resources in the collections, the higher use numbers for the e-resource–specific tabs are unsurprising.

Discussion

The Technical Services LibGuide has evolved significantly from its original incarnation and has received a substantial amount of marketing within the Libraries. The project leaders are now able to look back and reflect on the pros and cons of using a LibGuide in this way.

Advantages of LibGuides as a Technical Services Communication Tool

LibGuides provided what the department needed: a stable, reliable line of communication. The site itself was readily accessible to library staff; public services staff needed no additional authentication steps to access information on the site. Using an application with which library staff were familiar led to easier implementation.

Miami University Libraries is part of OhioLINK, a large library consortium, and the library purchases many of its resources through that consortium. The library also purchases resources locally for use by Miami University patrons only. Because of the number of resources purchased and because they are licensed and purchased by two different organizations, keeping track of where every purchase originated was difficult. The LibGuide allowed the department to provide definitive information about content purchased in both ways. In turn, this made helping patrons and reporting problems far more effective—staff could efficiently report a problem when they knew who was responsible for a problematic resource. Problems

with locally purchased resources generally could be resolved by Technical Services staff, while problems with consortially purchased resources had to be reported to the consortium.

Another benefit of using Lib-Guides for the department's communication was its flexibility. The ability to embed widgets, forms, and to pull RSS feeds from various sources increased the functionality of the site and the amount of relevant information that could be displayed. Through the use of forms, the department is able to establish a better tracking system for issues and requests. Instead of one staff person having most of a problem's history in his or her email account, issue tracking and resolution is located where multiple staff members may access it. This has improved the department's response to electronic resource issues and allowed better analysis of problem trends in subscribed resources. In addition, having library staff use a standardized form has improved issue reporting overall, reducing the need for departmental staff to check with others to get more information about a particular issue.

The maintenance of the site is focused on the content and not the application itself. Because LibGuides is hosted on the vendor's servers, the technical services department does not have to dedicate a staff member to perform upgrades to a local server and the application. Staff are free to focus on keeping the content up to date. Staff also are able to add new content and functionality to the site because the administrative interface is user-friendly and requires no programming knowledge.

Disadvantages of LibGuides

Using LibGuides for this technical services communication tool has two disadvantages. The first is storing all of the department information in a subscription-based cloud service. Like all libraries, the budget is subject to change on the basis of the economy, and the library is often faced with making cancellation decisions. Because LibGuides is a relatively new acquisition at the Miami University Libraries and staff like the product so much, the library staff are hopeful that they can make a good argument to the library administration if forced to justify the cost of the product. If the Libraries do have to cancel the subscription, export options will support saving and migrating the content created in a LibGuide. Content can be exported for the entire set of guides in XML format and individual guides also can be exported and saved in HTML format. If the department is forced to change systems, migration would not be instantaneous, but much of the content and formatting could be retained with some effort.

The second disadvantage in using a LibGuide is specific to populating the electronic resource usage statistics page. This has little to do with the functionality of the LibGuide itself, but is a matter of staff time—updating usage reports for many resources on a monthly basis is labor-intensive. Because this particular use of the guide is an interim solution for the technical services department, staff are looking at the time investment as a way to become intimately familiar with the library's resources and patron's usage habits.

Lessons Learned

In addition to identifying specific Lib-Guide pros and cons, the department has learned a tremendous amount about the broader issues of communication and relationships with staff. Of utmost importance is to be open to change and expansion of content. When the project leaders first started developing the LibGuide, they did not consider the uses it could have outside of problem reporting and tracking. Only after working on projects with other library departments did they begin to see additional potential uses for the LibGuide. Once public services staff members saw a site devoted to relevant technical services information, some requested that the project leaders add specific information. What began as a method of submitting problem reports quickly grew into a place to collocate many categories of frequently requested information.

A second lesson is that habits can be hard to change. Staff needed time to remember to go to the LibGuide as a first step in solving a problem or asking a question. For some staff, this was also an issue of trust; they had to become confident that submitting a problem to the department this way was a more efficient solution than sending an email message or making a phone call to an individual. Technical services staff still receive phone calls or email, most frequently when a front line staff member is working directly with a patron. However, the frequency of questions received through these channels has declined as technical services staff add more information to the LibGuide. Each time someone asks technical services staff members for a specific piece of information, staff first check to see if it is already available on the LibGuide—if it is, the staff provides the relevant URL. If it is not, the information is added if it is likely to be requested again. Having specific projects featured in the Lib-Guide forces staff to look at it, which is slowly altering their information-seeking habits.

The final lesson learned is that a more sophisticated level of communication and increased transparency has led to a much higher level of trust between technical services and public services staff. Public services staff are less likely to question the information

they receive and less likely to contact the technical services department constantly about a problem. They have learned to trust in the problem reporting system, making the process more efficient.

Conclusion

The Miami University technical services department sought a new solution to a persistent problem faced by technical services departments: documenting and conveying important information to staff outside of the department. The project leaders followed three guidelines as they developed their solution. They sought to include vital content that frontline staff need to perform their jobs; provide up-to-date content by constructing a content management plan, including who is responsible for updating specific pieces of information; and avoid excessive information to prevent information overload.

After first creating a mock-up of the proposed web-based information using Drupal, the project leaders decided to use LibGuides, a tool with which staff across the Libraries were familiar and that did not require extensive training or specialized skills to develop and maintain. Feedback solicited from staff in structured settings and as they used the tool, and feedback provided informally to the project leaders has facilitated its continuing development.

LibGuides provides a satisfactory platform that fit the department's need, but the LibGuide is only as good as the content posted on it. The careful design considerations of audience, content, and technical resources helped to hone the site to be an effective tool in communicating important information to other staff in the library. The LibGuide platform, however, added a sense of familiarity

because most public services staff had extensive experience in creating, maintaining, and using LibGuides. In addition to content, the success of the LibGuide also depended on the continuous marketing, growth, and feedback solicitations by members of the technical services department, including the project leaders. Staff habits had to be changed and the technical services department had to be mindful of that fact. If the technical services department simply posted the content but did little else in the way of engagement with the other departments, the LibGuide likely would not be as successful.

In this case study, LibGuides gave the technical services department a valuable tool in addressing the issue of communicating pertinent information to public services staff within Miami University Libraries. However, LibGuides only served as a platform and is not by itself the only way to deal with interdepartmental communication issues. Regardless of the chosen platform, the efforts of the technical services department in making sure that all library staff had both a clear, stable line of communication to the department and the information needed to help serve library users, is time and resources well spent. The time spent on such efforts have improved relationships between technical services staff and other departmental staff, which in turn leads to a higher level of service the library can provide its users.

Libraries may not utilize LibGuides. Regardless, the process of developing content and implementing a tool for interdepartmental communication would be similar no matter which specific platform is used. The steps taken at Miami University Libraries to implement an effective communication tools spanning departments experiences can serve as a model for other libraries.

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Book Reviews

Norm Medeiros

Managing Electronic Resources: A LITA Guide. Edited by Ryan O. Weir. New York: Neal-Schuman, an imprint of ALA, 2012. 179 p. $65 paperback (ISBN: 978-1-555-70767-X). LITA Guides, 20.

Managing Electronic Resources is exactly that: a guide to managing electronic resources in libraries. This guide is organized into eight chapters: two introductory chapters that briefly describe the e-resources life-cycle and the current environment in which electronic resources librarians find themselves; four chapters that describe in greater detail the particular components of the e-resources life-cycle; and two concluding chapters on the state of e-resource management staffing with a look ahead to what role e-resources management will play in the library of the not-so-distant future.

The first chapter opens with a broad overview of the e-resources life cycle, which ranges from evaluation through acquisition, and addresses accessibility, maintenance, and assessment. This chapter also provides some basic tips for new electronic resources librarians who are interested in both better organization of their daily tasks and furthering their professional development and career in e-resources. The introduction to the concepts of managing e-resources continues in chapter 2, in which the changing and challenging environment of collections is reviewed. A "more with less" approach is taken, which offers several options for providing access to prohibitively expensive resources, including interlibrary loan, pay-per-view, and patron-driven acquisitions. This chapter also contains suggestions to market e-resources on a small (or nonexistent) budget, and reviews open-source electronic resource management systems

(ERMS). A review of commercial ERMS would have been a valuable addition to this chapter, but in keeping with the "more with less" approach, no commercial ERMS are reviewed.

Chapters 3–6 provide a more in-depth look at the management of e-resources. In chapter 3, the expanding role of acquisitions in the realm of e-resources is examined. Particular attention is paid to the documentation of e-resource acquisitions because the responsibilities of acquisitions staff expand with electronic resources in contrast to print. Chapter 4 is a well-organized introduction to license negotiation, identifying and explicating key points in contract and copyright law for which familiarity is essential to the work of e-resources librarians. The chapter provides a detailed description of the basic components of a typical e-resource license, with tips and tricks to manage the negotiation and license execution process. Chapter 5 provides a seemingly exhaustive overview of the various ways libraries make e-resources accessible to their users, plus summaries of current and emerging authentication mechanisms, access points, troubleshooting, maintenance, and user experience considerations. Chapter 6 examines all aspects of usage statistics, from gathering data to analyzing and reporting statistical information about e-resources to stakeholders. Predictably, COUNTER (Counting Online Usage of Networked Electronic Resources) compliant usage data considerations garner the bulk of the chapter. Portions of this chapter that address COUNTER Code of Practice Release 3 are slightly out of date since *Managing Electronic Resources* was published just ahead of Release 4 of the COUNTER Code. However, the underlying practices to organize

and manage the data as described in this chapter continue to be relevant. The sections that examine creating meaningful statistics and effectively interpreting these statistics also are valuable.

Chapter 7 provides a welcome discussion of staffing levels to support e-resources management in light of the rising workload of e-resources librarians. This chapter provides a summary of the "soft" skills an e-resources librarian must cultivate, and ways to manage up, down, and across an organization to ensure that e-resources needs are adequately met. Anyone with an interest in team-building or learning to coach colleagues will find valuable techniques in this chapter; the management theories of appreciative inquiry, basic social styles, and backcasting are briefly summarized. In the final chapter, predictions regarding the near future of electronic resources are considered. These predictions are rather bold; many have been the unrealized predictions for the library of the future. However, the chapter provides some convincing arguments, such as predicting e-books will become the preferred format for book users, and that some libraries will cease purchasing print content altogether. The future of libraries will need to adapt to the ever-increasing ubiquity of e-content, and this future will affect far more than electronic resources librarians. This chapter predicts changes that will occur in all library divisions, including technical services, public services, and special collections.

Managing Electronic Resources is very well organized and provides clear, relevant examples of techniques to manage electronic resources that can be applied in academic, public,

and special libraries. The editor and contributors are careful to discuss techniques, best practices, and types of available tools without endorsing or delving too deeply into the nuances of specific systems used to manage e-resources—a wise decision considering the pace at which the e-resource landscape evolves. Writing a guide to managing e-resources that will remain relevant for longer than six weeks after publication is no easy feat; distinguishing underlying theories from coping mechanisms can be complicated. Weir and the contributing chapter authors have managed to do just this. The examples used in this guide and the practices they illustrate form a solid e-resource management text whose value will persist for years to come. —*Betsy Appleton (eapplet1@gmu .edu), George Mason University, Fairfax, Virginia*

Fundamentals of Managing Reference Collections. By Carol A. Singer. Chicago: ALA, 2012. 167 p. $60 paperback (ISBN: 978-0-8389-1153-2). ALA Fundamentals Series.

This book is part of the ALA Fundamentals Series and may serve as a targeted supplement to more general collection development works. Since most libraries still have print reference collections and librarians are struggling to integrate electronic titles with existing print collections, the topics covered in this guide will be relevant to many practitioners. Singer herself says that the reference stacks are full of useful resources, but admits to rarely consulting them. She then posits that a leaner print collection might gain more use. Her information on maintaining reference collections covers not only strategies for taming the physical reference collection, but also suggestions for incorporating virtual materials into that reference collection and the additional challenges of managing electronic resources.

Singer divides her work into nine chapters: "Reference Collection Fundamentals"; "Reference Collection Development Policies"; "Staffing Models for Reference Collection Management"; "Selecting Reference Materials"; "Acquisitions, Budgets, and Licenses"; "Collection Maintenance"; "Weeding the Reference Collection"; "Reference Collection Development and Consortia"; "Discovery and Access"; and a "Collection Development Policy Template" in an appendix.

Singer begins with some definitions of reference works and continues her discussion with the electronic aspect of reference collections. She then describes the relationship between print and electronic materials, and compares these two types of resources. Singer also considers how to define boundaries for both print and electronic collections. In the next chapter, Singer provides a rationale for a separate reference collection development policy, as well as a very thorough discussion of each of the desirable components of such a policy. The chapter on staffing applies only to larger libraries but clearly delineates centralized and decentralized models for managing reference collections. Singer also provides lists of advantages and disadvantages for both models.

The next topic is selection. Singer discusses some of the tools available to assist with selection and general criteria for choosing resources. She follows this introduction with specific selection criteria for different types of reference materials: online, aggregated reference book databases, freely available Internet resources, print monographs, and print serials.

In the following chapter, Singer provides a broad overview of the acquisitions process, including approval plans. With the exception of a reference to typing paper order forms, the workflows Singer outlines are fairly standard. She continues with a general discussion of various models for reference collection budgets. Singer then briefly covers some of the major components of licenses.

In the next chapter, the focus is on collection maintenance. Singer discusses potential workflows when new electronic resources are added (testing, branding, cataloging, etc.) as well as some of the ongoing challenges posed by collections of electronic resources, such as changing URLs and dropped content. When dealing with new additions to the print reference collection, older editions may need to be pulled or shifting may be necessary to accommodate new materials. Ongoing print collection maintenance may range from repairs and rebinding to inventory. Another facet of maintenance is marketing, both to library staff and library patrons. Singer advises that one should periodically attempt to examine the reference collection with fresh eyes to assess its adequacy.

Singer then tackles the sometimes dreaded topic of weeding. She delineates a number of the reasons offered for not weeding and counters with reasons why weeding is necessary. Singer then discusses some typical criteria for weeding, along with caveats about applying any single criterion as a hard and fast rule. Singer outlines two basic methods for weeding. The first strategy is to conduct a one-time major project with an established timeframe. The alternative is to organize an ongoing or continuous review of the collection without a firm deadline. She then reviews the pros and cons of each option. She provides a section covering the review of reference serials and another on weeding reference books in off-site storage, which is an issue primarily for larger libraries. The lingering question about the utility of off-site storage materials for reference tools is not addressed. Singer then discusses review of reference e-books and reference databases. She closes with some final tips for reluctant weeders.

In the next chapter, Singer discusses the role of consortia in building electronic reference collections. She notes budget implications ranging from potential savings to ongoing

and special libraries. The editor and contributors are careful to discuss techniques, best practices, and types of available tools without endorsing or delving too deeply into the nuances of specific systems used to manage e-resources—a wise decision considering the pace at which the e-resource landscape evolves. Writing a guide to managing e-resources that will remain relevant for longer than six weeks after publication is no easy feat; distinguishing underlying theories from coping mechanisms can be complicated. Weir and the contributing chapter authors have managed to do just this. The examples used in this guide and the practices they illustrate form a solid e-resource management text whose value will persist for years to come. —*Betsy Appleton (eapplet1@gmu .edu), George Mason University, Fairfax, Virginia*

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fiscal commitments. Singer includes a review of consortial advantages and disadvantages in terms of the reference collection, including a certain lack of local control over selection. In her final chapter, Singer examines the importance of discovery and access for reference collections, while also noting related challenges, especially with regard to electronic resources. Discovery tools are posited as a potential solution to some of the access issues and a possible bridge between print and electronic collections, but Singer argues that these tools are too new to be able to evaluate their utility thoroughly now. In the appendix, Singer offers a very detailed template for a reference collection development policy.

Throughout the book, Singer provides many useful checklists of criteria to consider plus many lists of pros and cons, which help frame topics for the reader. Each chapter includes bibliographic references and suggestions for further reading.

This book provides a good introduction to the many aspects of reference collection management. It is perhaps most useful for academic libraries, but the concepts are applicable to all library reference collections.—*Karen Greever (greeverk@ kenyon.edu), Kenyon College, Gambier, Ohio*

Open Access. By Peter Suber. Cambridge, MA: MIT Press, 2012. 242 p. $13 paperback. (ISBN: 978-0–262-51763-8).

The Internet and web have changed the way we consume information, be it for personal or academic use. Over the last decade, publishers of academic journals have been making the migration from print to online distribution. Meanwhile, many academics and others involved in the scholarly publishing industry have seen the potential of the web to widely disseminate information. Currently there are barriers to accessing much of the academic

material that is available on the web because it is owned and operated by for-profit, or toll access, publishers. To break down these barriers, academic institutions, libraries, nonprofit organizations, and authors are looking more to the open access (OA) movement, which encourages providing freely available research to anyone with a computer and an Internet connection.

Many librarians and academics have a general idea of what OA means, but have not really delved into the specifics of how it works. In Open Access, Peter Suber explains the ins and outs of the OA movement, in a quick and efficient way, to inform the busy researcher. The first chapter of the book, "What is Open Access?" succinctly explains each type of OA, from the difference between Gold OA (academic articles in an open access journals) and Green OA (academic articles housed individually in institutional repositories or digital collections), to the difference between Gratis OA ("access that is free of charge but not free of copyright and licensing restrictions" (175)) and Libre OA (access that is free of charge and most copyright restrictions). Suber also provides a glossary of commonly used OA terms.

In the first chapter Suber explains "what" OA is, and he dedicates the second chapter to explaining the "why." In this chapter, titled "Motivation," Suber lists the reasons why academic researchers and academic institutions should be interested in publishing in and supporting OA initiatives, including the exponentially increasing costs of commercial journals, gaps in access at even the most well-funded institutions, and usage restrictions placed on journals by publishers.

In the next four chapters of the book, Suber focuses on the "how" of OA. In a chapter titled "Varieties," he describes in more detail the differences between Green and Gold OA, Gratis and Libres OA, and how these different models may be intermingled. He also touches on how journals and

institutional repositories achieve Gold or Green status. In a chapter titled "Policies," he explains the emergence of OA mandates by academic institutions and funding agencies, such as the National Institutes of Health. These mandates, pioneered at many of the country's most prestigious universities and research organizations, strongly encourage, or in some cases, require faculty to publish finished works in the organization's repository, thus providing Green OA availability. This chapter also explains why mandates for Gold OA, requiring researchers to publish only in OA journals, would severely restrict the publishing possibilities for researchers because "only 25 percent of peer reviewed journals are OA" (91). The chapter titled "Scope" lays out the different kinds of materials that could be considered for OA publishing. The author points out that although the OA movement has been championed by the scientific community, it does not mean researchers from other disciplines or creators of materials other than research articles should be excluded from publishing their work within the OA framework. This chapter briefly explains how materials outside of academic articles, including theses and dissertations, research data, government data, source code, scholarly monographs, textbooks, creative works, newspapers, images, and other unique materials, would benefit from OA publishing. He touches on the readers, aside from traditional researchers, who will benefit from these materials being openly available, including lay readers and even machines utilizing opening access software.

The last chapter in this section, titled "Copyright," explains concisely how copyright works when an author publishes in an OA journal: "Either the author retains the key rights and the publisher obtains the author's permission, or the author transfers the key rights to the publisher and the publisher uses them to authorized Open Access" (125). The chapter also

fiscal commitments. Singer includes a review of consortial advantages and disadvantages in terms of the reference collection, including a certain lack of local control over selection. In her final chapter, Singer examines the importance of discovery and access for reference collections, while also noting related challenges, especially with regard to electronic resources. Discovery tools are posited as a potential solution to some of the access issues and a possible bridge between print and electronic collections, but Singer argues that these tools are too new to be able to evaluate their utility thoroughly now. In the appendix, Singer offers a very detailed template for a reference collection development policy.

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discusses copyright guidelines of toll-access journals in comparison with OA journals and how most publishers allow authors to place their works in their local institution's repository, thereby providing Green OA to their articles.

One concern of authors is the fee often required to publish in a Gold OA journal. In a chapter titled "Economics," Suber explains the payment structure for OA journals and allays authors' fears by offering suggested means of securing funding for OA publishing.

In the final two chapters Suber discusses the future of OA and encourages researchers to publish their articles in this manner, whether in an OA journal or institutional repository. Suber believes that the future of OA is bright, but only if we educate ourselves on how it works and rebuke common misunderstandings about it.

Open Access provides a brief but complete overview of OA publishing. The audience for this book is primarily researchers who might someday be publishing their articles in OA journals or institutional repositories, and have questions about OA publishing and how it can work for them. The book can be a helpful guideline for librarians who are generally interested in the OA movement, publishing their works in an OA format, or who are working with faculty on promoting OA at their institution.—*Elizabeth Siler (esiler@fiu.edu), Florida International University, Miami, Florida*

Sudden Selector's Guide to Biology Resources. By Flora G. Shrode. Chicago: Association for Library Collections & Technical Services, 2012. 85 p. $28.50 softcover (ISBN: 978-0-8389-8600-4) $13.50 PDF e-book. ALCTS/CMS Sudden Selector's Series.

Sudden Selector's Guide to Chemistry Resources. By Elizabeth Brown. Chicago: Association for Library Collections & Technical Services, 2012. 93 p. $28.50 softcover (ISBN: 978-0-8389-8591-5) $13.50 PDF e-book. ALCTS/CMS Sudden Selector's Series.

The Sudden Selector's Series provides assistance to librarians who are assigned subjects for collection development with which they are unfamiliar. These two new guides in biology and chemistry are particularly welcome for librarians like me with an undergraduate degree in English. The authors have written these guides for those who possess only a basic understanding of library reference needs and an elementary understanding of the sciences (Brown, xv).

The guides are essentially annotated bibliographies; the authors pair excellent introductions to their topics with selected references for further information and exploration. The guides are clearly written and well organized, although there are variations in their structure. Each begins with an overview of its science, including a description of the organization of literature in the discipline. The guide to chemistry provides an overview of chemists and how they approach information, followed by chapters on collection analysis, current awareness tools, the print literature, chemistry research tools, approval plans, and general advice. The guide to biology includes chapters on election tools, databases, and current awareness sources.

The guides feature both print and digital resources. The authors also include data repositories, additional specialized resources, and literature databases. There are a few dated materials in the guide to chemistry, such as Lehninger's *Principles of Biochemistry*, the fourth edition, which was cited although a fifth edition was published in 2008. In the guide to biology, some databases are marked "free," some databases are marked "subscription," but others are unmarked, rendering their status unclear (Shrode, 20). This confusion is but a minor problem—the number and types of resources reviewed in the guides, including

websites such as the Tree of Life web Project, Google Scholar, and a selection of wikis, are impressive.

As both guides deal with scientific inquiry, they address current research and how to keep up with trends in biological and chemical research. Brown notes that "applications of chemical principles to other scientific disciplines define today's research" (3); Shrode indicates that "a high degree of interdisciplinary crossover is evident in the literature" (2). One current trend addressed by both authors is the increasing availability of open access (OA) journals, though Brown notes that chemistry has been slower to adopt this new publishing model (43). Both authors provide lists of open access resources available in their disciplines and provide suggestions for how to monitor developments in the OA arena.

The assumption in both guides appears to be that the reader will work at a large institution. There are uneven efforts to make the content relevant to other sorts of institutions. For example, Shrode specifies conference proceedings in biology as a genre that public librarians may want to skip (6). Links to recommended sample library guides (Shrode, 9) are all from large institutions; examples from smaller academic and community colleges would have made a nice addition. Brown lists Library of Congress classification ranges for main subdivisions of chemistry (3–5), but does not provide Dewey equivalents until page 71. The annotations provide an avenue for those readers from smaller or specialized libraries to learn which resources are appropriate for them. For example, Shrode points out that the Encyclopedia of Life includes information suitable for the general public (60). Both authors include resources at a variety of levels and organize them into helpful categories; those resources in the broad categories may be useful in many different libraries.

Advice is interspersed throughout

discusses copyright guidelines of toll-access journals in comparison with OA journals and how most publishers allow authors to place their works in their local institution's repository, thereby providing Green OA to their articles.

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websites such as the Tree of Life web Project, Google Scholar, and a selection of wikis, are impressive.

As both guides deal with scientific inquiry, they address current research and how to keep up with trends in biological and chemical research. Brown notes that "applications of chemical principles to other scientific disciplines define today's research" (3); Shrode indicates that "a high degree of interdisciplinary crossover is evident in the literature" (2). One current trend addressed by both authors is the increasing availability of open access (OA) journals, though Brown notes that chemistry has been slower to adopt this new publishing model (43). Both authors provide lists of open access resources available in their disciplines and provide suggestions for how to monitor developments in the OA arena.

The assumption in both guides appears to be that the reader will work at a large institution. There are uneven efforts to make the content relevant to other sorts of institutions. For example, Shrode specifies conference proceedings in biology as a genre that public librarians may want to skip (6). Links to recommended sample library guides (Shrode, 9) are all from large institutions; examples from smaller academic and community colleges would have made a nice addition. Brown lists Library of Congress classification ranges for main subdivisions of chemistry (3–5), but does not provide Dewey equivalents until page 71. The annotations provide an avenue for those readers from smaller or specialized libraries to learn which resources are appropriate for them. For example, Shrode points out that the Encyclopedia of Life includes information suitable for the general public (60). Both authors include resources at a variety of levels and organize them into helpful categories; those resources in the broad categories may be useful in many different libraries.

Advice is interspersed throughout

both guides. Brown includes a full chapter of general selection advice that includes useful tips such as the average time chemistry books remain in print (82). Also noteworthy is the useful appendix of core journals in chemistry (85–92). The list of core journals in biology is found in chapter 2 of that guide (Shrode, 25–35).

The authors of these guides provide a great service for those suddenly assigned to select materials in biology and chemistry. Their expertise and enthusiasm for their respective disciplines are evident in their writing. Shrode and Brown are the mentors you wish you had at your institution. This reviewer is using these guides to compare her library's biology and chemistry collections to the lists of recommended resources for a general understanding in these fields. These guides provide an excellent review of how the literature is organized in biology and chemistry, which will enable readers to better search for answers in these subjects when reference questions arise. —*Anne M. Sleeman (asleeman@ccbcmd.edu), Community College of Baltimore County, Catonsville, Maryland*