

Library Workflow Analysis: University of Colorado-Boulder

The logo for R2 consulting, featuring the letters 'R2' in a large, white, sans-serif font on a dark red background, followed by the word 'consulting' in a smaller, white, sans-serif font on a light gray background.

**Observations
and Recommendations**

Rick Lugg and Ruth Fischer
www.ebookmap.net
November 13, 2006

Contents

	Page
I. Introduction -----	3
II. R2 Observations -----	6
III. Workflow Recommendations -----	11
Acquisitions/Collection Development-----	11
Cataloging -----	26
Electronic Resources -----	33
Music -----	35
Periodicals Room/Reference -----	37
Marking -----	39
Preservation -----	42
Systems -----	44
IV. Organizational Recommendations -----	46
V. Projected Benefits and Costs -----	59
VI. Implementation -----	61
VII. In Closing -----	65

I. Introduction

In October and November 2006, R2 Consulting spent fourteen days analyzing the selection-to-access workflows of the University of Colorado-Boulder Libraries. The analysis included five days of on-site interviews, extensive review of documentation, follow-up discussions with UCB administration and staff, preparation of this report, and a return visit to Boulder to present our recommendations. In addition to the Norlin Library, R2 visited and interviewed staff in the Earth Sciences and Music Libraries. Although the analysis centered on Technical Services, we also examined related departments and processes among Systems, Bibliographers, Collection Development, Public Services, Reference and Special Collections.

Our charge was to analyze workflows in light of profession-wide best practices, and in the context of UCB's own automated environment, vendor configuration and consortial relationships. Additionally, R2 was asked to propose organizational changes to facilitate the workflow improvements identified. R2's analysis was intended to help assess the effectiveness of current operations, and to determine the capacity of the existing organization to accommodate growth into emerging areas of librarianship with existing levels of staffing.

Our findings reflect a large central library and several branches grappling with changes in user expectations and content delivery, as well as a strong collections budget and very lean staffing. Library activity is occurring in a rapidly-changing and complex information environment. Performance among library departments is somewhat uneven. The difficulties inherent in performing both traditional library functions and new roles related to institutional repositories, mastery of non-MARC metadata and striking a balance between print and digital content are evident. The convenience and networked availability of electronic resources for users, coupled with their 54% share of the materials budget, has demanded, and continues to demand changes in both operations and organization.

There is much to be proud of at UCB, including:

- Extensive and well-controlled electronic collections
- Consistent recruitment of talented younger staff, bringing new ideas and perspectives
- UCB's Cataloging and Metadata Services group appears to be successfully transforming itself to meet the challenges of the digital environment, while beginning to make progress on long-neglected areas
- The high level of consolidation with Blackwell's Books Services (BBS) opens numerous opportunities for efficiencies

- An entrepreneurial approach to Special Collections

But there are also several areas of concern, which can be summarized as follows:

- Basic library operations for print monographs (and to some degree print serials) are absorbing more time and effort than is necessary.
- Significant backlogs exist in cataloging for new materials, Special Collections, Archives and other areas. Progress has been made within the last year, but much remains to be done.
- Due to the recent retirement of the long term head, there is a lack of experience/expertise regarding the management of Acquisitions—an area where significant change is needed.
- UCB is not an organization that deals constructively with conflict; it is perceived that decisions are not made effectively.
- Support for and knowledge of Millennium capabilities needs to be more widely distributed.

R2 has sought to address these issues in the recommendations which are described in the following pages. (They are also listed and prioritized at the end of this report.) For workflows, we have identified opportunities for increased automation, third-party support, and process improvement. These will reduce the hours now spent on selection, searching, ordering, copy cataloging, and physical processing of print materials. Implementing them will create capacity to pursue other initiatives more fully. These might include: clearing cataloging backlogs; e-resource maintenance, metadata creation, and liaison work related to the IR; and other priorities established by library administration.

But we also see deeper needs at UCB, related to communication, leadership, decision-making, and development of the next generation of administrators. We believe that our workflow recommendations will founder unless they are accompanied by significant organizational changes. Our argument and recommendations, therefore, are grouped as follows:

- **Observations**
- **Workflow Recommendations**
- **Organizational Recommendations**
- **Implementation**

Many of the changes we suggest have been implemented successfully in other academic libraries, and are common practice. Others may push the boundaries a bit. Although we usually expect objections to some ideas, our sense is that many people at UCB are hungry for change, and ready to move decisively. Many of these ideas have been put forward previously by UCB staff themselves.

Our recommendations are numerous, and some are complex. We recognize that they will require significant and sustained effort—much of which will need to take place alongside daily production work. Therefore, it is critical that UCB carefully analyze and evaluate each suggestion, and determine which to adopt, which to modify, and how to sequence them. This process will itself require a new level of leadership and communication, if the potential benefits are to be realized. Procedures should be put in place for collecting, validating and responding to staff feedback on R2's report, and incorporating it into the evaluation and implementation planning.

To a person, staff members and administrators were forthcoming and cooperative during the interview process, and have continued to provide helpful information via email and phone. We appreciate their commitment to the process. Although our report focuses on ideas for change, we are respectful of the work now being done at UCB, and feel privileged to have had such a close look.

Finally, a disclaimer, or at least an acceptance of reality: given the complexity of UCB's library operations and our limited time on site, we have undoubtedly misunderstood or misrepresented various details. We welcome correction and further discussion.

II. R2 Observations

The comments that follow cover a broad range of topics, some of which are beyond the scope of our analysis and recommendations. We include these both to give voice to them (something more readily done by outsiders), and to indicate the context in which our ideas—on processes, organization, and systems—are offered.

The nature of R2's work causes us to focus on problems and challenges facing the UCB Libraries. But we also identified important strengths during the course of our interviews, and have tried to represent both in the observations that follow.

- **UCB Libraries are performing well in many important respects**, even under difficult conditions. Despite very lean staffing, the Libraries have made great strides in management of electronic resources. Cataloging and Collection Development have positioned themselves well for new challenges related to metadata and selection of locally-produced digital objects. The Libraries' culture of autonomy allows interested individuals to shine. Overall, the staff is a useful mixture of newcomers and veterans, helping to preserve the important balance between tradition and progress. The senior leadership has created a climate of respect and tolerance, making the Libraries a good place to work.
- UCB Libraries as an organization **appears not to deal well with conflict**. This sometimes prevents difficult but critical issues from being confronted. Although this approach minimizes overt disagreements, it also permits problems to linger and decisions to be deferred.
- Perhaps related, there exists within the Libraries **widespread skepticism regarding change and new initiatives**—including the current workflow analysis.
- There seems to be a hunger within the organization for **more direction and input from senior management**, especially to help balance competing priorities.
- Because of UCB's organizational culture, **department heads enjoy significant autonomy within their own domains**. For those who use this autonomy well, and who forge effective relationships with their peers, much progress is possible. For those who choose not to do so, it is possible to remain isolated without peers being able to affect them. When disagreements arise, especially on initiatives requiring inter-departmental cooperation, progress can be stymied.
- This culture permeates the organization, including the task forces, councils and other working groups responsible for broad-based initiatives. Depending on the leadership of the group, there may or may not be deadlines. **There seem to be limited incentives for taking initiative or risks, and few penalties for**

delay or abdication of responsibility. Creating a sense of urgency or momentum becomes dependent on the skills and motivation of the individual project leader.

- Research requirements for librarians on tenure track in effect **limit contributions professional time directly to the operation**, at least until tenure has been secured. Although UCB is not unique in this respect, its impact on day-to-day functioning is greater than in peer institutions, due to its lower number of professional staff.
- UCB Libraries has **an admirable and humane approach to Human Resources**, and employs a number of people who might otherwise find employment difficult. There is a good deal of openness to staff concerns at all levels. However, this culture of tolerance and respect, which serves the Libraries well in many ways, also has a downside: poor performance and unprofessional behavior have in some instances gone unchecked.
- The Libraries have begun to adapt to the dramatic decline in state support (now at 7%, we understand) by adopting **a more entrepreneurial approach, seeking grant funding for defined, fixed-term projects**. This tactic has already started to succeed, driven in part by the creation of the Special Assistant to the Dean position. However, it also clearly carries far more administrative overhead, and will increasingly require new skills and staff hours spent in grant writing, accounting, project management and reporting to funding authorities. Essentially, it will cost the Libraries more to fund themselves in this manner.
- The idea that the Library is “poor” surfaced in many discussions. In fact, UCB is actually **collection-rich but staff-poor**, as demonstrated by the presentation developed by the AD for Administrative Services. While UCB teaching faculty have been vocal in support of a strong materials budget, they may not recognize the need for staff hours to make the collections accessible.
- In our view, UCB has been wise to adopt **an access-oriented attitude toward its \$9 million materials budget**. This has allowed collections money to be used for MARC records, Millennium maintenance, ILL, shelf-preparation, binding and other third-party services that, in effect, extend UCB’s staff and provide access to more content more rapidly. More of this will be necessary.
- Given the extent of the Libraries’ reliance on technology to deliver its services (a reliance that will only increase), it’s surprising to learn that there is **no budget line for IT**. This discourages the very type of infrastructure and network planning that could improve reliability and save money in the longer term.

- Although **54% of the materials budget is dedicated to electronic resources, only 14% of Technical Services staff resources is allocated to their management.** While this shows that a disproportionate amount of staff effort remains directed toward print material, the ratio is actually much better than we've seen in other libraries, once hours in Collection Development are factored in. UCB Libraries has adapted more quickly than many of its peers, by focusing greater numbers of staff on electronic resources.
- UCB Libraries' operations are something of a paradox. For instance, while electronic resources (even without its full share of staff hours) are largely under control, **the workflow for selection and acquisition of print material is problematic.** These processes remain almost completely manual and item-specific, despite the availability of proven batch techniques and systems that could automate many of them.
- UCB has a **pragmatic, and in our view appropriate, approach to Special Collections.** Its sustained focus on core holdings such as the Women Poets, Photo Book and Mountaineering collections helps clarify priorities, and identify non-essential content and tasks. Special Collections and Cataloging have collaborated effectively to make some progress on the 40% of the collection that has not been cataloged, in part by using strategies like creating "in process" records and collection-level finding aids.
- There are **some unusual aspects to the Systems situation at UCB.** In addition to no budget line, the group includes little to no programming capacity. Testing is conducted on a live server, since no test environment is available. Help desk or "ticketing" software used in many other libraries is absent. Much FTP and bulk download capacity is currently handled centrally, rather than distributing permission to operating departments.
- **Collection Development has made important contributions to the Libraries in the last 12-18 months.** The serials cancellation was successfully completed, and funding for monographs stabilized. Approval profiles have been largely rewritten, with a target of reducing returns to 5% or less. Electronic selection via E-Notes and Collection Manager has begun in earnest. CD has taken the lead on trials management, negotiation, and licensing for electronic resources, as well as supporting some functions more typically handled in Acquisitions. Good working relationships have been established with Acquisitions and Cataloging.
- There are **significant difficulties within Acquisitions,** and between Acquisitions and other departments and branches. These difficulties involve not only processes, but also communication and trust. These issues are explored in detail below. There is a great deal of history involved, much of which lingers. The effect on the organization is profound, and has led to a strategy of sometimes

working around Acquisitions; e.g., much e-resources responsibility has grown up in Collection Development, rather than its more typical home in Acquisitions. New leadership is beginning to change this, but much remains to be done.

- **Time to shelf for new materials** is, or should be, a significant concern. The workflow test conducted in early June 2006 concluded that the average time from receipt to shelf for firm orders is 24 days, and for approval titles 45 days. In addition, these figures *exclude* the effect of the cataloging backlog, which now stands at approximately four months. These are among the longest timeframes we've encountered. Three to five days is possible.
- **Cataloging and Metadata Services has demonstrated real leadership and vision in the past 12-18 months.** It has streamlined procedures and moved rapidly to take advantage of third-party records, and to develop metadata expertise. It also spearheaded a policy change to accept separate records for print and electronic versions of journals and books, which enabled use of third-party records on a larger scale, and significantly increased access for users. The impending hire of a metadata librarian will round out UCB's already excellent skill sets in e-resource cataloging, Dublin Core, EAD, and MODS/METS.
- Although a recent push has reduced the **cataloging backlog** from 6 months to 4 months, it still contains 8,000-10,000 titles, subdivided into several categories. As in any operation where backlogs develop, UCB is forced to dedicate significant time and effort to managing these items. The "patron hold" rush process, for example, requires daily retrieval of 15-20 items from the various sections of the cataloging backlog. About 1/3 prove difficult to find, making the process quite time-consuming. Even under rush conditions, patrons are promised the book "within 5 days" from when they place the hold. Thus, the backlog not only absorbs extra staff time and space, but also impedes access.
- **Marking** has also recently developed a significant backlog, in part from the Cataloging "push" and in part due to fluctuating student schedules. This backlog is especially troublesome, since books awaiting marking are stored randomly on "carts and carts and carts", to paraphrase one frustrated Public Services person. Further, they show as "available" in Chinook. The only way to locate these is by searching all the carts. While some Reference and other Public Services staff continue to do this, others have given up.
- **Gifts-in-Kind (i.e., donated books and serials) are largely uncontrolled.** No one is certain how many await consideration, whether in the 30th Street warehouse space or in Norlin. The Gifts Librarian has recently focused almost exclusively on management of gift funds. She refers most unsolicited calls to subject bibliographers, after trying to ascertain the scope and general subject area of the proposed gift. In FY 2006, 1,357 items were added to the collection.

Informal estimates indicate that approximately 2/3 of the gifts accepted by bibliographers prove to be duplicates once they are searched.

- **Digital Initiatives has developed a significant program** in a relatively short time. With input from the Digital Projects Advisory Group, several initiatives have been identified, planned and implemented; there are other projects ready to proceed, pending available staff capacity. DI's strong emphasis on standards for format, production, and metadata provides a secure foundation for growth. This is an area where more participation from bibliographers is needed, to help identify potential content and projects.
- As in most library organizations, there are **tensions and communication gaps between the branches and Norlin**. One example cited: While Technical Services asserts that the introduction of separate records for print and electronic versions of a title was announced multiple times via the Norlin listserv and other avenues, staff in some branches claim that it was never communicated to them.
- **UCB's membership in the Alliance generates pros and cons**. Prospector has clearly proved a success, expanding the level of resource sharing. Group negotiation for e-resource packages has resulted in significant savings, and in increasing content being made available for users. Other areas are more mixed. The shared purchase plan pilot requires the use of a vendor other than Blackwell's for undergraduate titles in two subject areas, introducing unfortunate complexity in procedures, and uncertainty about potential duplication. The Alliance's selection of Fedora, based on open-source software, for a shared Institutional Repository raises questions for some about the Alliance's ability to support it. The time that elapsed in making this decision highlights another occasional downside of collaboration.
- Like many libraries, **UCB struggles with integrating new systems and processes into existing workflows and organizational structure**. Recent examples include WebBridge and the ERM module. Project groups were responsible for learning how each works, populating them with data, and getting them operational. However, there is no clear process for handing them off to the most appropriate operating department, training staff, and adapting existing workflows and workloads to accommodate them.
- Many people expressed **frustration with the number and quality of meetings** they are required to attend. Some of that stemmed from "meeting for meeting's sake", but more of it seemed to come from the fact that most meetings don't start or end on time, and that they sometimes are not run well—i.e., with planned agendas and a chair who keeps the group on task and on topic.

III. Workflow Recommendations

UCB Libraries' workflows, as mentioned earlier, are somewhat mixed. While electronic resources are reasonably well-controlled (and still improving, thanks to new tools), selection, acquisition, cataloging and marking of print materials are more problematic. Although monographs purchasing is highly consolidated, UCB has not taken full advantage of the potential efficiencies. Technical Services activities related to print resources account for 85% of staff time, but only 46% of expenditures.

There are also some opportunity costs created by the current workflows, in that faculty and staff hours are needed for a wide range of other tasks, from e-resources and Special Collections to digital projects and the Institutional Repository. Somehow, UCB must create the hours needed for these tasks without increasing staffing levels. This will require changes in priorities, letting go of some tasks once deemed important, and using every tactic possible to improve efficiency and obtain services from outside the Libraries. Fortunately, there are many steps UCB can take to make this much-needed transformation. We begin with the area of greatest opportunity.

Acquisitions/Collection Development

We have several concerns in relation to Acquisitions. In numerous instances, other departments interacting with Acquisitions indicated a lack of confidence in processes conducted there, citing slow placement of orders (especially non-mainstream ones), poor follow-up and claiming, and very little communication regarding order status, re-vending, fund depletion or other problems. Many bibliographers have created "shadow" systems to track requests submitted to Acquisitions, to provide an independent record of activity. These run the gamut from paper files and e-mail folders to Excel spreadsheets. Other departments and branches find it difficult to approach Acquisitions with questions or requests, noting that usually "a simple discussion is not possible" – i.e, interactions can be unpleasant and are therefore avoided.

For its part, Acquisitions staff feels beleaguered, convinced they are working harder than other groups, yet having to absorb new tasks such as item records and barcoding. They feel disrespected by other departments, who they believe regard acquisitions work as simple, and who don't fully understand the complexities involved or the volume of material processed. This has led to serious morale issues within the department. During the recent cataloging push, an issue arose between Acquisitions and Serials Cataloging regarding improper choice of bibliographic records at point of order for titles that turned out to be serials. A certain amount of static developed, with Acquisitions feeling insulted by offers of further training and by the manner in which the issue was brought to their attention.

In terms of process, there are a number of red flags. 100% of firm orders are reviewed by the supervisor after they are prepared; approximately 10% are changed. Changes include standardization of codes; identification of potential series and standing order duplicates; added volumes. 100% of firm order invoices are reviewed as well. More than 30% of firm order records include free-text notes (some portions are inserted by macros). In some cases, these are notes to the vendor. In others, they are used to create a decision trail for assigning "out of block" locations and similar issues; i.e., to prove that an alternate location was requested by a bibliographer rather than Acquisitions when Cataloging questions it or assumes it's an error.

Many productivity enhancements that are in common use in other libraries have not been implemented. An item-by-item approach characterizes most transactions, even though UCB's level of consolidation with Blackwell's lends itself well to batch processing. Even when order requests are sent electronically to Acquisitions via e-mail or Collection Manager, they are printed for processing. Bib records are searched individually in Chinook and OCLC. For specialized or out-of-print items, vendor information provided by the bibliographer is often ignored.

Management of the approval plans is unnecessarily complicated. Brief bib records with electronic invoice data provided by BBS are not used to their fullest extent; system-based duplicate detection is not used, nor are approval funds encumbered, except for those rejected and returned. Extensive sorting is needed to arrange books in LC Class order, when bibliographers would prefer profile order. Two shipments are in process at any given time. Referrals and rejects must be reviewed multiple times by selectors. Because a Blackwell's deposit account is used, returns must be processed using individual credit memos rather than line-offs. Some complications arise from delays in review of shipments, or the multiple-step referral system, but we heard willingness in CD to revisit some of these practices. A discussion of streamlining has been avoided for some time, however, for some of the same reasons noted above.

To be fair, there are some bright spots. UCB enjoys an excellent discount from BBS on approval titles, due to negotiation by Acquisitions. Acquisitions staff participated successfully in the recent FastCat experiment. Relations are improving at the department head level among Acquisitions, Collection Development and Cataloging. Monographs purchasing is well-consolidated with BBS providing approximately 29,000 of 36,000 -- 75% of the total. After returns, 21,000 of these arrive via approval, which reduces the number of orders to be placed. Serials are well consolidated with EBSCO and Swets, and EDI invoicing is in place for both agents.

Overall, however, significant change is needed and possible. The following recommendations are intended to initiate that change:

Instruct BBS to Ship Approval Books by Profile

According to Kim Anderson of Blackwell's, this arrangement is possible. Since the profiles are already in place and have been recently revised, it should be implemented immediately. Books should be arranged on approval shelves grouped by profile. This will eliminate most sorting, and should begin to reduce referrals from one bibliographer to another. It will also allow bibliographers to see exactly what their profile generated, which will clarify where individual changes are needed and help to reduce returns.

Require Electronic Selection for Titles Handled by Blackwell's

Electronic selection via E-Notes and Collection Manager is already well established at UCB. This approach eliminates paper forms in favor of an electronic record that includes extensive bibliographic and related information such as tables of contents, and transaction history of UCB and other Alliance libraries. Bibliographers can "request" that Acquisitions order a desired item electronically, adding a fund code, location, initials, note, and other local data. "Requested" items are stored in Collection Manager for daily retrieval by Acquisitions.

As many at UCB already know, this approach offers a number of advantages. Once a title has been selected in Collection Manager, that action becomes visible to other selectors. Duplication alerts can occur based on this transaction history. Default values can be set for local data fields. Activity from consortial partners can be viewed at the item level. Title announcements can be forwarded to faculty or colleagues electronically in several ways. Desiderata files can be kept by each selector. Above all, selection decisions are communicated immediately to Acquisitions. This approach would apply to approximately 8,000 orders per year. Much of this is happening already; however, the full benefits occur with the next step described below.

Note: Approximately 200 titles from Eastern Book and 150 from Abrams might also be consolidated with Blackwell's, along with English-language titles now supplied by Harrassowitz. This would allow shelf-ready treatment of another 400-500 items.

A final note: Harrassowitz, Casalini Libri, Aux Amateurs and YBP all offer similar systems. Although UCB's order volume with these vendors is relatively low, we suggest implementation of electronic selection through them be considered as a second phase, after higher-yield changes have been completed.

Purchase and Install Innovative’s “MARC Loader Without Invoice”

This Millennium load profile is different than the Extended Approval Plan interface, and as far as we can determine, is not currently owned by UCB. A full description of it can be found on Millennium’s support site—look for a document entitled “Loading Records from Book Vendors.” Export of data from Collection Manager to Millennium cannot take place without this software.

Use of this loader will change some long-standing practices in Acquisitions. The extensive strings of codes (for vendor, fund, etc.) and macros that are now inserted into 949 subfields as individual records are downloaded from OCLC will no longer be needed. Instead, default data elements are set in the load profile, mapped to 96x fields, and Blackwell’s transactions will be handled in a single batch each day.

Export Bibliographic & Local Data from Collection Manager to Millennium

UCB has not yet explored this portion of the electronic selection workflow. We recommend that you do so as soon as configuration and testing of the MARC Loader Without Invoice can be completed.

The ordering method we are about to describe is in place and successful in hundreds of libraries.

As described above, selectors “request” wanted items via Collection Manager, adding fund, location and notes if needed. The file of requests from all selectors builds over the course of the day. At a specified time every day, Acquisitions staff exports the requested items from Collection Manager to Millennium, based on a Collection Manager Export Profile—which outputs a brief MARC record with transaction data in 96x fields. The form is available at:

http://www.blackwell.com/collection_manager/how_to_use/export-profile_form/

Upon import through the Innovative load profile, the program identifies potential duplicates (based on ISBN, LCCN or title key), then creates a brief bibliographic record and a pending order record in Millennium. Funds are encumbered as part of the process, based on the fund code assigned by the selector; the program alerts for overages upon import. Exception files are created for potential duplicates and for fund overages. These files require resolution by Acquisitions staff.

Once Acquisitions staff have resolved exceptions, they approve the order, and it is sent electronically to the vendor via the Millennium Electronic Book Ordering module, now in EDIFACT format.

This approach has several benefits. First, it eliminates the need for pre-order searching of Chinook. Second, it eliminates the need to search for and download bib records from OCLC. Third, it eliminates the need to key bib data for any items not in OCLC—the bib record and order use Blackwell’s data. Fund balances will be very close to real time. Requests will be consistently turned into orders within 24-48 hours. Activity will be visible both in Chinook and Collection Manager, eliminating the need for shadow systems. Staff time is focused exclusively on exceptions and management of batches. The export and import profile must be established and tested, but this is a one-time process.

Rely on Collection Manager, Blackwell’s and Millennium for Duplication Control; Eliminate Most Pre-Order Searching

As noted above, Millennium detects duplicate bib records upon import. In Innovative systems, this detection can be based on ISBN, LCCN or title key. We suggest LCCN, since it offers the best chance of catching paper/cloth or US/UK duplicates—ones that ISBN will miss. Most libraries find that use of the title key index returns too many false positives to be useful.

This should eliminate the need to search Chinook at point of order. In addition, titles “requested” in Collection Manager are obviously available from BBS, so there is no need to search there or in any auxiliary source. Since this process uses the vendor’s bibliographic record, there is no reason to search OCLC. Because Blackwell’s has blocked UCB’s standing orders, there should be no duplication between that stream and firm or approval. In short, no pre-order searching should be needed for these 8,000 orders per year.

Minimize Free-Text Notes in Order Records

Free-text notes, whether directed to the vendor or to another department within the Library, almost always impede batch processing. While some exceptions and notes are unavoidable, R2 recommends that notes be minimized. Examples of notes that should no longer be included under the new workflow: “out of block” justifications (since bibliographers will assign location at point of selection, responsibility is clear); notes to Blackwell’s about not duplicating on approval (this should be assumed).

Provide Monthly Reports of “Held” Orders to Bibliographers

At present, when Millennium alerts Acquisitions that the balance in a particular fund is insufficient to cover the order they are attempting to

place, they simply hold the request until the next fiscal year. If we understand correctly, the bibliographer is not notified. We recommend that this practice be changed, and that Acquisitions provide to bibliographers regular, probably monthly, reports of "held" orders for each fund. Bibliographers can then decide whether to cancel the order, to release funds for another title.

Release EDI Orders to Vendors Daily

If we understand correctly, purchase orders are now released to vendors two or three times a week. We recommend UCB move to daily release, at least for Blackwell's, as one more step toward faster fulfillment.

We also recommend that the current 100% review of orders be curtailed, in favor of a 5-10% sample to identify patterns or training issues.

Eliminate All Selector "Shadow" Systems

As noted above, many selectors now keep an independent record of the order requests sent to Acquisitions. These "shadow" systems reflect their lack of confidence in the existing system. Keeping these shadow systems up to date takes time from other tasks. Under the proposed process, they should no longer be needed, as transaction history will be visible in both the vendor systems and Millennium, updated daily.

Improve Performance on Non-Mainstream Orders

Approximately 9,000 orders fall outside the Blackwell's universe. In addition to more specialized books, they include DVDs, Music CDs, Scores, Maps, and items for Special Collections and Documents. This is an area where we heard many complaints about timeliness of order placement, use of inappropriate vendors, and insufficient follow-up and communication. Some branches, such as Music and Earth Sciences, have sought permission to place their own orders, absorbing that work into their own staffs. While some of those arrangements probably should remain in place, others (such as maps ordering) could conceivably move back to Acquisitions if timeliness and accuracy can be improved. In the Organizational section, we suggest the creation of a sub-unit within Acquisitions that takes direct responsibility for these non-mainstream orders.

Implement PromptCat, Shelf-Ready, and Electronic Invoicing for All Blackwell's Firm Orders

Titles firm ordered are rarely returned, and lend themselves immediately and effectively to shelf-ready treatment. For Blackwell's, these orders will have followed the procedure described above: electronic selection, export of brief bibliographic record to Millennium, and EDIFACT purchase order sent to the vendor electronically. Upon receipt, Millennium must be updated in

several ways: receipt against the appropriate open PO; creation of an invoice within Millennium's Acquisitions module, overlay of the brief bibliographic record with a full cataloging record, and creation/update of an item record, including barcode number.

These steps are accomplished manually for firm ordered titles at present; we recommend that this be changed as follows. UCB should expand its contract with OCLC for PromptCat services for these accounts, and contract with BBS for physical processing services. PromptCat files would contain, in addition to cataloging data, invoice information in 98x fields of the MARC record, and UCB's purchase order number in 935 \$a. (This mapping is worked out through the PromptCat profiling form, in collaboration with the vendor. Since you have recently done this for the shared purchase plan titles, the framework is already in place. Expansion should proceed quickly)

Millennium's Extended Approval Plan Interface, which UCB already owns, governs the process at receipt. Upon import, Millennium retrieves the appropriate PO, based on the number in 935 \$a, receives the item against the PO, and builds a pending invoice. Under library-specified rules, the OCLC record delivered by PromptCat overlays the pre-existing bib record in Millennium—matching occurs based on the PO#, which is linked to a corresponding bib record. If a barcode has been scanned into the record by the vendor, Millennium will also create the item record. Again, all of these steps occur automatically in a batch, with exceptions highlighted for staff attention. In most libraries, these books then go directly to the shelf.

Most PromptCat libraries experience "hit rates" (percentage of acceptable records) of 85-90% If this proves true for UCB, approximately 7,000 of the 8,000 Blackwell's firm order titles could arrive fully shelf ready in this stream. This reduces workloads in receiving, copy cataloging and marking by that amount. (It also seems likely that the number of Blackwell's firm orders will increase somewhat as profiles are adjusted to reduce returns, which will confer additional benefit.) We recommend that the item record status default be "available" and that these books go directly to Stacks Management for shelving upon arrival.

Note: an underlying assumption is that a correct location will either be supplied at point of selection and carried through the process, or that it can be derived from fund, account, or other persistent data. This will be important to assure correct labeling, and correct setting of holdings by OCLC.

Implement PromptCat, Shelf-Ready, and Electronic Invoicing for All Approval Profiles in the Sciences and Technology

This recommendation seeks to build on the shelf-ready firm orders outlined above, as well as on the shelf-ready work already underway for titles shipped on the Alliance shared purchase profiles. In the course of our interviews with bibliographers, it became clear that the Sciences are also prepared to accept shelf-ready books on approval. We propose that begin immediately, including the following disciplines/funds:

- Astrogeophysics
- Biology
- Chemistry
- Computer Science
- Engineering
- Earth Science
- Geology
- Kinesiology
- Mathematics
- Molecular, Cell and Developmental Biology
- Physics
- Psychology
- Science

Based on FY06 data, these areas accounted for approximately 4,000 approval books. Assuming a 90% PromptCat hit rate, as described above, 3,600 of these would arrive fully shelf-ready and could go directly to stacks once checked in. The 400 exceptions would be easily recognized, as they would lack spine labels, and could be diverted to Cataloging. Science bibliographers would no longer need to visit the review shelves, except to peruse referrals from other bibliographers.

We suspect that the speed and ease with which these titles reach the shelves (and therefore users) will inspire bibliographers in other areas to consider adoption. This may be further aided by directly seeing the results of their profiles, based on the new sorting arrangements. Other profiles could be added to the shelf-ready stream as they are ready. Ultimately, it's possible that a majority of titles could arrive in this fashion.

Note: In order for OCLC to supply the correct location (and therefore spine label), it will be necessary to derive that from some persistent data element or combination, such as fund and account. Reference works may require a separate BBS account.

Reduce Time for Bibliographer Review from 14 Days to 7 Days

For non-Science approval books, the review shelves will need to remain while the approval profiles continue to be refined. However, there will be at least 4,000 fewer books, and the profile-based sorting should save some reviewing time. We suggest that the review period be reduced to 7 days, rather than the current 14, primarily to get books to the shelf more quickly. This will allow for elimination of the parallel review cycles for multiple shipments as well as the color coding system of segregation.

Change Default Decision for Approval to “Accept if No Action”

At present, approval titles not actively chosen by a bibliographer (or by Collection Development review for the General fund) are assumed to be rejected, and returned. We recommend reversing this practice, as is done by many other libraries. The operative assumption becomes “accept” for all titles not specifically rejected by bibliographers. This sometimes prompts more timely review by selectors, or can allow those who have confidence in their profiles to forgo weekly review. It also provides Acquisitions with a default instruction that involves less work than returns. Implementation may need to wait until the effect of recent profile changes have become visible, and until shipments begin to arrive sorted by profile. In part, this is also tied to the next recommendation.

Consider Establishing a Central Fund for Approval

Some libraries have done this for years, and recently more have considered this approach as a way to reduce time spent on title-by-title evaluation of monographs. Basically, we suggest that funding for approval books work more like that for electronic resources, with a large central fund covering most purchases. Because so many of UCB’s monographs are received on approval, this central fund (and the efficiencies associated with it) would be quite large—perhaps \$1 million. As now, bibliographers would have firm order funds that are separate from this.

Once the profiles have stabilized from recent changes, UCB could begin this approach—ideally, at the beginning of FY08 in July 2007. The idea is to designate a single fund that applies to all Blackwell’s approval titles. There is a philosophical shift underlying this. When reviewing approval books, the question becomes “does this book belong in our library” rather than “should I pay for this from my fund?” This approach is likely to lead to lower returns, and less agonizing over individual titles. It also may allow more interdisciplinary titles to enter the collection, since the approach is oriented to thinking about the collection as a whole. Blackwell’s can provide management reports at the end of each fiscal year that allow Collection Development to monitor receipts for equity among disciplines.

This approach may also help reduce returns more rapidly, allowing implementation of shelf-ready books for a greater proportion of incoming titles. It will also simplify those procedures greatly if fund codes do not have to be mapped to individual profiles.

Implement PromptCat and Electronic Invoicing Only for Non-Sci-Tech Approval Profiles. When Returns Reach 5% or Lower, Implement Physical Processing

It's likely to take six months or more before new approval profiles are sufficiently refined to generate low returns. In the interim, it makes sense to forgo the physical processing that renders books non-returnable. On the other hand, PromptCat records containing embedded invoice data can continue to allow batch import of cataloging records and automated invoice processing. Approval titles, of course, typically have no pre-existing bib or order record in Millennium. The absence of a PO number in 935 \$a of the PromptCat record alerts Millennium that this is an approval title, and the Extended Approval Plan interface then creates a bib record, an order record, and a pending invoice line upon import. No bibliographic overlay is necessary. If fund codes have been mapped to approval profiles, a fund code can be included in the invoice and the net amount encumbered upon receipt.

There are slight drawbacks to this. For instance, if a title is returned, the PromptCat record will still have to be paid for. But this cost is only as high as the return rate, and should diminish steadily as the profiles are refined. In the meantime, UCB can benefit from reduced copy cataloging, and the groundwork can be laid for subsequent physical processing. Shelf-ready treatment should be considered as soon as the return rate on a given profile reaches 5% or less.

As Shelf-Ready Services Are Adopted for Approval, Eliminate Review Shelves in Favor of Web-Based New Books/Resource Lists

Once books are no longer returnable (due to shelf-prep), the primary reason to review them is to know what's being added to the collection. We contend that this sort of review can be done nearly as well from a well-designed "New Resources" list that is updated weekly. Colorado State University Libraries provides an excellent example, complete with tables of contents, jacket scans, SFX, consortial links, etc.

<http://catalog.library.colostate.edu/search/ftlist^bib341%2C1%2C0%2C350/mode=2>

Other libraries, such as the Tri-Colleges, offer RSS feeds and e-mail lists to notify selectors when the list has been updated. Scrolling and browsing

these lists enables selectors to see what's entering the collection, to request or refer titles of interest. http://trilogy.brynmawr.edu/cgi-bin/newbooks/newbook_choose.pl

We recognize that UCB has a version of this in place already, under the heading of "Recent Acquisitions." It appeared to us as if it were updated only periodically (e.g., the Political Science listing is dated May 2006.) There is also a "Newly Available E-Resources" section on the Libraries' home page. If not in place already, we recommend that UCB investigate automatic creation of new titles lists, triggered as new titles become available in Chinook. Many of the existing records have tables of contents or contents notes, which, if we understand correctly, are keyed in copy cataloging. Since most BBS titles will bypass copy cataloging under the new procedures, it may be worth considering purchase of TOC and other enhanced data from Blackwell's or Syndetics/Bowker. (We understand that this investigation has begun here; this is merely intended to support that effort.) In fact, since Colorado State already does this, it might be worth exploring whether UCB and/or the Alliance as a whole might join that contract.

Eliminating 7 days on review shelves makes new books accessible to patrons more quickly, and eliminates the need to change status to "available." As noted above, when approval shipments begin to arrive shelf-ready, or when a central fund for approval is established, this "virtual" review will likely seem more acceptable.

Expand Electronic Invoicing to include blanket & firm/slip orders from all vendors who support it. Electronic invoices are now supplied only on approval plan accounts from BBS. However, other vendors, such as Harrassowitz, Casalini, Aux Amateurs and Puvill Libros also provide them for approval and firm order accounts. Implementation of this could potentially eliminate invoice keying for 800-1,000 additional titles each year.

Reject New Books that Arrive Damaged

In some cases (if the title has gone OP for example), it may be necessary to keep damaged items and send them directly to Preservation for repair or binding. For the most part, however, and given the shortage of in-house staff, it may be more efficient to return damaged pieces to the vendor who should be held responsible for no cost replacement and shipping.

Note: We are unclear about the size of this problem. Staff in the area suspect that too many of these materials are being received, with the expectation that repairs can be made in-house. Some measure of the problem would help rationalize the response.

Eliminate Unsolicited Gifts Except in Special Collections

At present, gifts at UCB are largely uncontrolled and unattended. The Gifts Librarian has recently focused almost exclusively on management of gifts funds, due to issues in the Development office, leaving little time to refine the existing process for donated material. Calls from potential donors are referred to the most likely bibliographer. The bibliographer then decides whether to accept the donation. Over the years, the number of titles awaiting consideration has continued to grow. No one has an actual count, but in addition to those held in the basement of Norlin, there are others in warehouse space on 30th Street.

When bibliographers are able to find time to review books, they identify those most of interest to the Libraries. These titles then go to Acquisitions, where they are searched in Chinook. Approximately 2/3, according to an informal estimate, duplicate titles already held by the Libraries.

In FY06, only 1,347 gift titles were added to UCB's collection. Those 1,347 titles were selected from a much larger number, each of which was retrieved, stored, sorted, and reviewed by selectors. Extensive searching had to be performed. Items were received; cataloging records were created; the items were barcoded, labeled, and shelved. Titles awaiting consideration occupy significant shelf space in Norlin. All of these staff, system and space resources could be used for higher-priority material. The actual cost of obtaining a "free" books is actually quite high—especially when any bibliographer time that goes to review could be going toward DIAL or the Institutional Repository or other needs.

Because the benefits are low and the costs relatively high, we recommend that UCB articulate a "no gifts" policy in all areas except Special Collections proper, and other specialized collections, such as Music. [Note: this recommendation applies to gifts-in-kind (books, serials, etc.), not to financial gifts.] A provision should be included that allows the Library to solicit specific gifts of known value at its discretion. Otherwise, the policy of the Library, which cannot be overridden by a selector, would simply be "no, thanks." The fact that it's a Libraries-wide policy takes the individual decisions—and the difficulties of refusing a request—out of the hands of selectors. This decision should be broadly communicated to the UCB community.

During our visit, no one spoke strongly in support of the current approach to gifts. Certainly, donors looking for a tax deduction will be disappointed, but that falls well outside the Library's purview. We recommend immediate action on this policy, since support seems high and opposition low. Once

the policy has been approved and publicized, the warehouse and Norlin should be emptied of all titles now awaiting consideration, and they should be discarded.

Train Acquisitions Staff to Recognize Series More Accurately

As noted earlier, communication on this issue has been difficult. However, there is clearly a training need here, and some way of addressing it must be found. In addition, this is an area where some errors will always occur, because either choice is defensible. At its most basic, the problem is that Acquisitions sometimes chooses a record from OCLC that does not match UCB's ultimate cataloging treatment of the item. Under the proposed workflow changes, Acquisitions will no longer be choosing records for most incoming material; the PromptCat matching algorithms will do that, based on UCB's instructions. Fewer people in Acquisitions will be downloading the remaining records, which may help to focus and simplify training.

For those problem titles that remain, we believe it is important to keep the process linear. When a question arises and a title is routed to Serials Cataloging, R2 recommends that you allow SerCat to import a record, apply and scan a barcode, and send it on to Marking—rather than return it to Acquisitions.

Implement the Innovative Interface External Accounting Interface

At present, one full-time staff member manually enters all of Acquisition's invoices into the University's PeopleSoft system after they have been processed in Millennium. This manual keying is not only inefficient; it potentially introduces errors, and forces a monthly manual reconciliation. As we understand it, UCB already owns Innovative's "External Accounting Interface" that is designed to pass accounting data electronically from Millennium to a university accounting system like PeopleSoft. Although it will require some customization to implement, the benefit from this module could be significant, freeing almost one FTE in TS.

Detailed information from Administrative Services suggests the potential for further accounting inefficiencies that may be imposed by the new University Administration/Accounting. Several of the possible changes assume manual entry of invoice data into PeopleSoft, either in the library or in central accounting, followed by manual error-checking and verification processes. To avoid these more cumbersome requirements, it may behoove the library to move as soon as possible to implement the electronic feed of invoice data from III to PeopleSoft, thereby sidestepping the problem of new or changed paper-based workflows.

With a new university administration and new university accountants, etc., it will be important to remember the library's role in educating outside departments about your unique needs. Be ready to stand your ground, especially when new requirements are atypical. Be familiar with best accounting practices in university libraries, and be prepared to push-back as needed to maintain reasonable (and standard) workflows. In particular, the Libraries need to retain the ability to create their own purchase orders (especially since tens of thousands are created here each year), and to limit the use of A-cards for anything except rush and specialized orders.

Continue to Reduce Print Serials

Although we recognize that many print serials have recently been cancelled at UCB, R2 recommends continued scrutiny and cancellation, since these decisions exert so much leverage on the periodicals workload. To the extent that print titles can be cancelled, check-in, claiming, bindery management, bindery expenses, and space needs can all be reduced.

R2 recommends that UCB develop formal policies for continued cancellation of print serials as electronic equivalents are added. Current practice already tends in this direction, but we suggest that a more comprehensive approach might be useful. We commend the degree to which UCB has cancelled print when electronic access is available, and only suggest that the current policy and its benefits be formalized and publicized.

Consider Reduction of Check-in, Claiming and Binding for Some Serials

Librarians at the University of Nevada, among others, contend that check-in of print periodicals (in general) can be suspended without undue impact on the patron. The hours saved can be redirected toward higher-demand electronic resources. [See: Anderson, R. and Zink, S. "Implementing the unthinkable: the demise of periodical check-in at the University of Nevada *Library Collections, Acquisitions, & Technical Services* 27 (2003): 61-71 for a compelling description.]

While many libraries find this approach difficult to accept in its entirety, most can realize benefit from a more limited application of it. R2 recommends that UCB extend its current no-check-in policy for newspapers to weekly newsmagazines and any low-cost, low-risk titles—for example, anything that will not ultimately be bound and/or those for which an electronic version is available.

Even this conservative approach could reduce check-in significantly, since it focuses on the highest-frequency titles. The same decisions would eliminate

most claiming on these titles, as only those issues not found by patrons would surface as problems.

Review Serials Binding Criteria with a Goal of Reducing Activity by 20%

Like the two previous suggestions this is primarily a policy issue, and the 20% reduction merely an arbitrary target. But, given the extent of user preference for electronic journals, it seems reasonable to reduce activity associated with print to the lowest possible levels, freeing that time and money for higher priority activities. Cancellation of print serials in itself reduces the number of titles requiring binding, but we recommend further scrutiny. Could UCB agree to share binding responsibility with other Alliance libraries, so that any print serial is only bound and retained by one library? We recommend this issue be placed on the Library Council's agenda.

Allow Serials Check-In Staff to Enter ISSN into the Catalog Record

At present, one receiver is doing this, while others report that they are not allowed to. While we are uncertain of the details, check-in is a logical place for this to occur, and we suggest that this practice be made more consistent.

Miscellaneous Smaller Recommendations

The following suggestions are self-explanatory, and although relatively low in impact, worth implementing:

- Instruct BBS to reduce bib slip copies from 4 to 2
- Eliminate 100% review of orders—replace with 5-10% sampling
- Eliminate 100% review of invoices—replace with 5-10% sampling
- Eliminate most manual tallies
- Incorporate invoice posting into receiving procedures

Cataloging and Metadata Services

Although large cataloging backlogs remain for both new and retrospective material, enormous progress has been made in CMS within the past 12-18 months. The recent “push” on the new titles backlog reduced it from six months to four months. Recent decisions to reduce checking of specific fields in incoming records and establishment of quotas have improved throughput. The decisions to discontinue daily checking of the First Time Headings report and corrections of death dates has freed some capacity in Database Maintenance. As noted earlier, implementation of a separate record policy for print and electronic versions of a title has enabled use of Serials Solutions MARC record service. Well-organized and evaluated batch loads of eBook records have allowed rapid user access to hundreds of thousands of new titles. Recent experiments with FastCat and PromptCat procedures hold promise for accelerating the handling of new titles.

Coverage loads from Serials Solutions are 98% complete; Serials Cataloging is making steady progress assigning subjects to ERM resource records, and suppressing OPAC records for titles in the ERM. Cataloging has reached out to Archives, Special Collections and other departments with large cataloging needs, and begun to make progress on their backlogs. A strategy of creating collection-level finding aids in EAD has been implemented in some instances. Significant work has been accomplished on procedures—and in communicating procedures via Sharepoint. Re-indexing needs have been identified, and a project planned to implement some elements of that in the near future. A metadata librarian position has been created and successfully recruited for. Finally, CMS incorporates expertise with Dublin Core, “cross-walking” of data between MARC and other standards, and is developing expertise with METS. Even though a number of challenges remain, this Cataloging group is as well-positioned as any we’ve seen in regard to emerging trends.

Nevertheless, R2 offers a few recommendations intended to encourage additional bold steps; especially in relation to cataloging mainstream materials. In the January 2006 issue of *Library Resources and Technical Services*, (Vol. 50, No.1, 5-9) Deanna Marcum poses the following questions (among others) about the Future of Cataloging:

1. *If the commonly available books and journals are accessible online, should we consider the search engines the primary means to access them?*
2. *Massive digitization radically changes the nature of local libraries. Does it make sense to devote local efforts to the cataloging of unique materials only rather than the regular books and journals?*

There are no clear answers here, but given the current divergence of opinion about the future of traditional cataloging, we recommend that UCB think ever more creatively about how to reduce cataloging costs, particularly those related to new, English-Language monographs.

Accept Duplicate Call Numbers

The importance of shelf arrangement has declined in the automated and interdisciplinary environment. Patrons rarely use classification or call number in OPAC searching, even as a secondary search. Duplicate call numbers are not a significant problem, even for patrons who browse the stacks as the two items will still be co-located. The time spent identifying and eliminating them is not worth the cost. Therefore the amount of staff effort expended in establishing unique call numbers should be eliminated.

It is important to remember that for outsourcing to be cost effective, UCB must accept call numbers from the vendor records and must not seek to proof/edit every record. Recognize that there will be occasional duplicate call numbers, mismatched editions, mistags and typographical errors in access fields. UCB should implement a quality review of these records to ensure acceptable performance, but perfection should not be the goal.

Note: We've recently seen a reasonably efficient method by which problematic call numbers are identified retrospectively, after the books have already been put to the shelf. Students could manage this task and if the UCB community deems it a high priority, a regular process could be implemented for as long as patrons express interest in browsing the stacks.

Eliminate Cataloging Backlogs for New Material

At the time of our visit approximately 9,252 monographs were awaiting cataloging, even though DLC records were available for over half. On average, books remain in this backlog for approximately four months. We see this as problematic in a number of ways.

There is an apparently high level of comfort throughout the libraries with the idea of 4 month cataloging backlogs (because these items are findable); expecting users to submit rush requests if necessary. As may already be clear, R2 believes it a priority for UCB to eliminate working queues, rather than managing them. One of the primary concepts of an efficient operation is to match incoming volume with equivalent throughput capacity.

Sometimes that equation can be solved by adding staff. At UCB, as in most academic libraries, however, this is no longer an appropriate response. Rather, workflow steps must be minimized and service parameters adapted

to be in synch with available staff resources. At this point, it is imperative to shift the orientation even further away from traditional practices, toward a true production mentality, which includes working without queues.

The introduction of PromptCat services for mainstream materials will make it possible to reduce the backlog almost immediately. Still, some 15% of mainstream titles (PromptCat no-hits) and 10,000 non-mainstream titles will still require in-house copy cataloging. Even for these, it should be the goal to get books to the shelf within days of receipt, rather than weeks or months. Several strategies could be adopted here. Simply establishing the expectation is the first step.

Purchase TOC Service from Blackwell's, to Enrich the OPAC

We understand this is already underway. Some ToC's can be included in PromptCat records. If additional ToC access is deemed important, we support UCB's current consideration of an enrichment program through Bowker or Blackwell's, and buy rather than key or scan ToC data. This will provide consistency across all streams of monographs. For details about this service, refer to their site:

http://www.blackwell.com/library_services/technical_services/tables_of_contents/

Outsource Authority Control Processing

At this point, most libraries periodically send their authority files out for automated comparison and matching. This approach systematically identifies entries needing update, routinizes maintenance of authority files and will free time for staff members currently involved in authorities related work.

At present, although individual titles get authority control at the point of cataloging (in MilCat), batch loaded records receive none. If PromptCat is adopted for the bulk of new monographs, the current inconsistent approach will have increasingly negative effect. It seems clear that a more systematic and automated process will be necessary. The recent LC decision to discontinue series authority control and the current lack of original cataloging expertise within the libraries further exacerbate the problem. R2 suggests that UCB acknowledge that in-house control has become untenable; and to research outsourcing options sooner rather than later.

Minimize the Number of Serial Titles "Classed Together"

To maximize the number of titles that can enter the PromptCat/shelf-ready stream, it will behoove the library to take a good look at all monographic series currently classed together. Not knowing the number, it is unclear

whether this idea is worth pursuing, but by making the decision to analyze as many as possible, UCB will maximize the potential PromptCat benefit. Needless to say, these are decisions that should be made in conjunction with CD and PS.

Familiarize Catalogers with Non-MARC Metadata Formats

Even as the flow of print material fully occupies many catalogers, it is important to expose everyone to emerging trends in the profession. Having never seen non-MARC formats, some catalogers fear the shifting focus and will resist the suggestion of change, especially on a personal level. This is only natural.

By eliminating the mystery, staff members will more easily embrace the possibility of learning something new. Any who have moved from MARC to non-MARC cataloging have been surprised that the new formats are simpler than MARC yet rely on many of the same principles. Here, as elsewhere in the organization, specific examples and realistic workflow scenarios are immensely helpful in paving the way forward.

Increase Original Cataloging Capacity

While R2 enthusiastically supports the recent reorganization in Cataloging and Metadata Services, nearly all the original catalogers were pulled into supervisory roles, and away from day-to-day production. This has created a shortage that must be addressed by filling currently vacant positions if possible. A couple of additional strategies could be considered as well.

Increase Complexity of Cataloging for Copy Catalogers

One idea that has been successfully employed in other libraries would be to train copy catalogers to assign call numbers and subject headings. This would allow remaining original catalogers to focus exclusively on material for which no record exists. With the adoption of PromptCat services for mainstream material, we think that copy catalogers should be expected to perform more difficult cataloging, assuming tasks now reserved for professional catalogers.

Shelve Books with Brief Records

Another, even more radical idea has been adopted in some libraries, which gets books to the shelf almost immediately, and at very little cost. This is done by assigning a shelf location (call number) and one subject heading, a title, an author, and a couple of intuitive key words. Libraries who have adopted this approach continue to (systematically) locate and overlay improved records, once they become available via OCLC or other university catalogs. (The University of Minnesota, in particular, has been working

successfully with this approach for some time.) If circulated, a full record is created.

Outsource Non-Roman Cataloging

As was described to us, there is considerable language expertise within Cataloging and Metadata Services, for Western European Languages, Latin, Greek, Hebrew, Yiddish, and Russian. At UCB however, as on many ARL campuses, East-Asian, Hindi, Persian, and Arabic collections are growing, and language facility in the cataloging department is a mounting concern. Fluency in these languages should be considered in the hiring process. As well, grant writers on campus who are seeking to acquire content in these languages should be asked and expected to include some level of monetary support for cataloging and other technical services.

As we understand it, UCB is already actively exploring outsourcing this activity via OCLC TechPro. We support that approach fully. Knowing the options will allow the department to make rational decisions about hiring this language expertise, or outsourcing some of the most problematic material.

Consider Alternative Cataloging Standards for Some Formats

The high cost of traditional cataloging in an era of declining library budgets and competition from commercial search engines, has inspired libraries to find new ways to meet user needs while decreasing costs. Alternative standards have begun to emerge, which are intended to simplify the cataloging requirements while maintaining appropriate access. These new record types are designed to function in library ILSs, shared catalogs, and metasearch systems. We recommend that UCB track these developing standards, and adopt non-MARC alternatives where possible. Some of these include:

- *VRA Core Categories (for DVDs and Videos)*
<http://www.vraweb.org/vracore3.htm>
- *Access Level Record (for Series)*
<http://www.loc.gov/acq/conser/alrFinalReport.html>
- *Access Level Record (for Non Serial Remote Electronic Resources)*
<http://www.loc.gov/catdir/access/accessrecord.html>

Catalog Theses Only to the Level Needed

R2 suggests that UCB reduce its efforts in this area, and simplify cataloging requirements for theses, again in response to user behavior. As we know, these typically backlog, awaiting subject headings. Masters theses from 2004-present are currently queued.

UCB creates original records for print dissertations in OCLC, as well as receiving ProQuest electronic records for them. Once both records are in MilCat, the abstract and 856 field from the electronic record is moved to the print record, at which time the electronic record is deleted.

Instead of focusing on creating national level records for these works, we suggest full utilization of the ProQuest Record, without significant enhancement. We suspect that patrons primarily retrieve these works by keyword or by department name or discipline, often looking for the most recent material; or by author in cases where they know him or her personally. If these search patterns can be borne out at UCB, it may be that formal LC subject analysis should be abandoned. In many libraries, subject headings are not assigned to theses except to those for which the title which does not adequately convey the subject. Shelf location can be assigned by copy catalogers.

Maintain PCC Contributions to the Extent Possible

The Program for Cooperative Cataloging (PCC) is an internationally recognized program with a goal of making more and better catalog records available faster and cheaper. UCB is an active participant and we applaud your continuing commitment. After all, these programs can't work without the strong commitment of many libraries. At the same time, it is important to know and control the cost of this effort.

Although, concern was expressed about the impact of PromptCat on UCB's ability to continue PCC participation, it occurs to us that it will have little. In FY 2005, all of UCB BIBCO contributions were created at the full level and included both original cataloging and enhanced OCLC vendor and UKM records. These contributions were primarily for foreign language materials and included some records for special collections materials. These are categorically not those to which PromptCat will pertain. All non-mainstream materials could still be candidates for PCC-level work.

A far greater concern is the relatively small number of hours available for original cataloging. As described elsewhere, professional catalogers have, of necessity been diverted to electronic/digital initiatives, supervisory roles, and archives, leaving just two people to do the bulk of original cataloging, including Bibco/NACO work. This is the issue that should cause concern.

Eliminate Routine Review of PCC Contributions

As we understand it, all PCC records are peer reviewed prior to submission. Although occasional errors may go undetected, the time spent in this way nearly doubles the cost of creating these records. Once a cataloger is fully trained, our recommendation is to cease this review process. If a cataloger has a specific question, s/he should ask for advice; otherwise, the records should be assumed adequate. Here again, be reminded that perfection is not the goal, particularly when original cataloging expertise is at a premium.

Electronic Resources

Again, we want to commend the UCB Libraries for their success to date in managing electronic resources. Despite the staffing shortage, great strides have been taken to provide patrons with appropriate access to digital content. In general, our advice is to keep on keeping on. Bravo!

We do believe, however, that ER related work should be better staffed, and distributed to operational units at every opportunity. In the section on Organizational Recommendations below, we recommend staffing a new unit, in which members will be fully dedicated to the acquisition of electronic resources, and to the development of new ER opportunities and solutions. With the successful hire of a second metadata cataloger, Cataloging and Metadata Services are well prepared to manage tasks related to description and retrieval.

Ramp-Up Implementation of ERM

As a result of meeting with the ERM Task Force, it became clear that an aggressive implementation schedule should be considered. The fact that a launch deadline had never been imposed was a surprise to us, but is clearly the result of a “bottom-up” effort with no specific administrative mandate. In any case, the group was enthusiastic about a go-live date of January 15. Additional enthusiasm was garnered around the idea of a coordinated ERM/WebBridge/WebPacPro release; having it occur during the January break could have significant advantages.

Subsequent to this discussion some reservations surfaced, as related to - indexing the Chinook database (which must happen prior to implementing the ERM), and expanding the number of material type codes (which may have implications). Please know that R2 is respectful of the complications that lie beneath the launch of a new system, especially a launch that includes multiple components. Clearly, the prerequisite planning and maintenance must be done, and the communication and contingencies must be in place. We recommend careful consideration of all this prior to setting a final date.

In any case, we urge the library to be aggressive in its movement forward. Act with urgency. Don't allow the quest for perfection to inhibit progress.

Assign Ongoing Maintenance/Operational Tasks

It appears that UCB is struggling with the question of how to move from development to production; and how to turn a project into a practice. We are hopeful that the organizational recommendations described below will help to address these issues for electronic resources. Clearly, there must be operational staff support for new products and processes.

As for the ERM, we suggest that its “care and feeding” become the primary responsibility of the new Electronic Resources Unit in Collections Services. Cataloging and Metadata Services may have a secondary role here; and of course, Public Services will have access to the content. WebBridge maintenance could follow a similar pattern.

As a general rule, we think it’s helpful to assign “ownership” of specific systems and modules, not because they won’t be shared, and not because there is ever a perfect home for such complex products, but because they will be better husbanded. By assigning “ownership”, product expertise can be developed and procedures/policies can be established that will allow full utilization. As new functions are made available, the “owner” can recognize opportunities and recommend the most appropriate workflow response.

Music

R2 was pleased to have an opportunity to meet with this group, even though it was not originally on the schedule. As we would expect, the Music Library has some unique requirements and performs many of its own technical services. Books with accompanying media and scores are cataloged locally. Unhappily, all materials (books and CDs) cataloged in central TS are reviewed upon receipt in the Music Library, where call numbers are corrected and subject headings are added. As is true in many music collections, shelf location is more critical here than in broad subject collections, as browsability remains a central concern.

As the main library implements automated workflows that include cataloging and shelf-preparation for monographs, it will be important to recognize legitimate exceptions. Some of those have been identified above. It may be that music monographs should also be excepted. Clearly, staff from this library should have the opportunity to participate in this decision-making process.

A few additional ideas surfaced during the time we met together:

Extend Ordering Authority in Millennium

At present, a staff member in the Music library creates order records and saves them to a review file for someone in Acquisitions to process every week or two. Given the unique nature of many materials ordered for this collection, and the non-mainstream vendors who can supply it, R2 supports the idea that one person in the Music library be allowed to process orders. Likewise, authority should be granted to edit open orders.

Allow Local Receiving for Some Materials

Again, recognizing the exceptional nature of some of these materials, and given the current receipt to shelf timeframes in TS, it might make sense for some categories of material to be received directly by the Music Library. We note that there is already precedent for this in Earth Sciences (maps).

For Music, local receiving might include Rush orders (particularly from the local book store), and special collections purchases, which should not be processed in the typical way. Having mail delivered between the libraries just three times a week increases the need for this change to be considered.

Investigate Cataloging and Processing Services for Music

Although scores and CDs would never be considered part of the “mainstream” described above, there may be specialty vendors that have developed electronic ordering, cataloging, and processing services. These should be investigated as they could potentially provide some of the same benefits described for mainstream books.

Note: Theodore Front Musical Literature, Inc. is listed on the OCLC site as a PromptCat participating vendor.

Periodicals Room/Reference/Art

R2 met with four staff members in this area, who are still feeling the strain of a major reorganization that occurred three years ago, which merged three previously discrete units. They, and their few students, feel themselves to be spread too thinly. A couple of strategic decisions could ease their situation somewhat.

Continue to Reduce the Size of the Print Reference Collection

The most obvious way to do this is to stop acquiring reference books in print when an electronic version exists. Electronic reference (especially ready reference) has become the norm in most academic libraries. It is generally agreed that this category of eBook enhances the user experience, while saving space, and reducing exception treatments in the TS workflow. Over the longer term, it may be reasonable to eliminate print reference as a physical location. Pseudo reference or highly advanced reference materials should be shelved in the stacks.

Eliminate Reference Sub-Locations

In the immediate, R2 recommends that the library think carefully about the value (versus the cost) of maintaining so many sub-locations in reference. As we understand it, there are nine, including: Stacks, Atlas, Education, Grants, Index, Oversize 1, Oversize 2, CD Reference, and Ready Reference.

All (except stacks) require secondary marking (colored dots) and a sub-location entered in the record. These distinctions tend to be fluid, with bibliographers requesting changes on a regular basis. In addition to the maintenance headache, these sub-locations confuse patrons. We recommend that you eliminate as many as possible, as soon as possible. This will be particularly important with BBS shelf-ready materials.

Reconsider In-House Routing of Periodicals

At present, 130 print journal titles are being circulated among library staff, prior to being shelved and/or bound. As we can all imagine, the task of recollecting these issues is a sizable burden for those seeking to bind them. R2 recommends some creative thinking about the problem:

One easy solution would simply be to stop routing them, or stop routing those that are also available electronically. Another option would be to stop binding them. Acknowledge these subscriptions to be in support of professional development for UCB staff, and not for the collections per se. Other options surely exist; but should be considered in light of their impact on an already stretched staff in the Periodicals Room.

Clarify Timing and Impact of the “One Desk” Initiative

Even though several documents describing this initiative exist, and affected staff are aware of the general goals, there is considerable and understandable angst about how and when it will finally play out. There is an absence of detail that begs the question of “my position?”

Changes of this magnitude always inspire nervousness; making it incumbent on administrators to be as specific as possible, and to be as forthcoming as possible, even when plans are stalled. Lack of communication breeds suspicion and causes morale to plunge, even when the organization is most in need of active participation in the process.

Reconsider Check-In in the Periodicals Room

As part of the One-Desk Initiative, it seems likely that several TS workflow issues will be considered, including this one. As you might guess, we would advocate for centralizing the function if possible.

Preservation/Marking

R2 visited the UCB Library at a time when the backlog in this area was bigger and older than anyone could remember it being, with some materials having been in the queue for nearly six weeks. Per our interviews with members of the team, the typical working queue is two weeks, which mirrors the workflow data collected in June. The current backlog was evidently exacerbated by the special cataloging “push” last Spring.

Even a two week backlog, however, has negative implications for the user in that the OPAC instructs them to “ask at circulation”, yet the materials are difficult, sometimes impossible to find. Based on the distress expressed by bibliographers and PS staff, this workflow topic is ‘hot or hotter’ than any other, and deserves careful attention.

As described above, the receipt of shelf-ready monographs will ease the circumstance in this area, reducing the volume of in-house marking by up to 9,600 units a year almost immediately; and reducing the flow by an additional 13,600 units once the approval plans are fully honed. It’s possible that this change alone, will allow the unit to eliminate the backlog entirely, and to work with queues of 1-2 days rather than weeks. This should be the goal.

In terms of the marking work that will remain in-house, there may be additional opportunities for increasing efficiency.

Eliminate Branch Inconsistencies Where Possible

Although these decisions should be made in coordination with representatives from various branches and locations, it just makes sense for all marking to be as alike as possible. During our time onsite, we became aware of a few examples of non-standard treatments. No doubt the unit could enumerate others.

For example, there is inconsistency between branches about how they want accompanying material to be handled. Further complicating the issue, catalogers are not always familiar with the differences and may include a note in the record (and in the piece) such as, “1 map in pocket”; regardless of whether that is the rule for the particular branch.

Some (or all?) branches ask that dust jackets be retained for display purposes. With decreased browsing, it may be time to discard all jackets, thereby simplifying the process in various TS units, including Marking.

Eliminate Physical Book Plates

Here again, this decision must be made by those in administrative positions, but the benefit would be reaped both in Marking and Acquisitions. It may

be useful to estimate the number of plates applied each year, and to judge the cost in terms of time spent in Marking. It may be a minor issue at UCB, but from our perspective, the concept and aesthetic of the physical book plate is an outdated remnant of another era.

Libraries everywhere are automating workflows and increasing focus on electronic content. This requires reconsideration of traditional practices, including the way we have plated books acquired with particular gift funds and endowments.

If there is a legal requirement to plate books purchased from a particular fund, you must obviously continue to do so. To the extent possible, however, UCB should eliminate them in favor of more efficient and possibly more visible means of tracking materials acquired via specific endowments. For example, it may appropriate to develop a permanent presence on the library web site, where the library can acknowledge the individuals and or families that continue to support the library collection. It's even possible to link specific title lists to each of the most significant funds, thereby giving donors and their descendants a way to know more about how their money is being spent. Perhaps the Advancement Office could help the library develop this kind of site.

In future, when gifts are made for new library materials, the library should seek to avoid book plate requirements, and encourage donations for digital content.

Plan to Work without Hand-Written Call Numbers

Various systems and process issues will make it difficult for the Marking unit to work without the call number inscribed on the piece. As demonstrated by the recent FastCat experiment, however, this is a hurdle that must be surmounted. If R2 recommendations are adopted, the majority of new books will arrive from BBS with PromptCat records. Many will arrive fully processed, and these will not enter the Marking unit at all. Many others will arrive with records, but without processing. For these, the cataloging stage will be eliminated, and the books will arrive in Marking without inscribed call numbers. Note: non-shelf ready books from BBS will have scanned barcodes.

Given the way in which labels are currently created at one stage, and applied at the next, the only way to ensure accuracy is to match the label with the inscription. As we heard while onsite, weaknesses in Millennium related label generation are being addressed. Likewise, ergonomic issues related to the position of the printer and perhaps the workflow process itself may benefit from additional scrutiny. It seems clear that label creation and

application will have to be combined in a single workflow step. Only with the title and call number visible on-screen, will the staff member or student be able to ensure labeling accuracy.

Preservation

As we understand it, preservation is a relatively new function at UCB, and the Libraries are still grappling with how extensive a program they can afford to build and maintain. In addition to a massive print collection, including nearly 900,000 volumes stored offsite, UCB needs to consider the preservation needs of its burgeoning digital collections. A number physical environments need to be assessed in addition to Norlin and PASCAL, including Music, Earth Sciences, Engineering and other branches. Discussions and planning are needed with Collection Development, Digital Initiatives, Special Collections, Archives, Government Documents, branches, and the Alliance. Given its relatively late start, implementation of a full-scale preservation program at UCB will be a massive undertaking.

In our view, this needs to be approached conservatively and cooperatively, with several key questions in mind:

- Is Preservation a responsibility that is more cost-effective when handled regionally, via the Alliance?
- How can the number of items subject to Preservation treatment be minimized; especially, should a first step be more extensive agreements on shared last-copy responsibility, and accelerated withdrawal of print when secure digital equivalents are available?
- What are the prospects for a shared Alliance conservation lab, perhaps housed at PASCAL?
- Is there a preservation component to the current Digital Initiatives? How will other digital objects (such as data sets) that fall outside of DIAL be secured? Where will responsibility for archiving materials on the Institutional Repository be placed?
- Will it be necessary to reduce the amount of material collected, in order to fund some elements of its long-term stewardship?

In some ways, it seems that UCB has an opportunity here to scale its Preservation program very deliberately, provided the Libraries as a whole can agree on its parameters—and provided it seeks a cooperative solution. The first step might be to initiate a structured discussion of Preservation at a Library Council meeting.

Formalize the Preservation Goals at UCB

Although we recognize that this is not an official “mission”, the Preservation Department currently seeks to:

"... secure access to the materials of the collection through good preservation practices in binding, book repair, reformatting and general collection maintenance. In order to do this, the department assesses the needs of the collections and makes thoughtful, cost-effective judgments regarding the disposition and handling of the materials. The department serves as a link between the public services and technical services units of the Libraries, providing information and advice on appropriate handling and disposition of materials."

This is a perfectly sensible statement, but we are concerned that the focus of this department is entirely print-based. Granted, limited staffing and short funds severely constrain the department's capacity to perform even the most basic repairs, but it's of equal concern that all digital archiving and preservation strategies are being contemplated in CD and Systems.

R2 suggests that the library (led by the Preservation Librarian) draft a monetarily feasible 'statement of intent' regarding preservation of content. This statement should address both print and electronic initiatives, including the rate or volume of material that the library expects to preserve. Third party services (for all formats) should be investigated as part of this work, and cooperative archiving solutions should be developed and/or adopted as aggressively as possible. As well, R2 recommends that you seek opportunities to enter into regional agreements that spread responsibility for last copy storage between a large number of libraries, thereby minimizing UCB's retention obligation.

Ensure Clarity Concerning Preservation Expectations

Even now, those within the department understand that the library will not rebind pieces that have not circulated, but shelf-shifting projects still flood the department with requested repairs. Bibliographers either don't understand or don't agree with current service parameters in this regard.

Systems

As noted earlier, UCB's Systems situation is somewhat unusual, with the absence of a budget line for IT hardware/software, and relatively lean staff in support of the ILS and related systems. While R2 realize that budgetary change of the magnitude needed may be unlikely, we feel compelled to put forth the following recommendations:

Include Systems Representation in the Administrative Cabinet

This is described fully in the Organizational section of this report.

Increase the Capacity of Systems to Support the Library Operation

In some respects, ILS administration is more of a "hub" than any other aspect of the UCB Libraries. A great deal of unique knowledge, information and authority is lodged here. Many FTP transactions, definition of load profiles, recommendation and purchase of new modules and capabilities, software upgrades and large-scale database tasks all reside within Systems, and largely with the Faculty Director. Most communication with Innovative Interfaces also funnels through this position.

Given the centrality of Millennium, ERM, and WebBridge to the services UCB provides, any interruptions caused by absence or competing priorities can have significant effect on progress, potentially delaying discussion and implementation on critical tasks. (We want to stress that our concern is systemic and no reflection on the Faculty Director.) An important instance where this will be important is imminent, and described in the "Electronic Resources" section: a possible January 15th package of user-oriented enhancements, including re-indexing; ERM implementation; and Phase One of WebBridge. Timely implementation will require sustained, prioritized effort from all departments, but Systems is key. Is there enough capacity?

We suspect not, but even if there is, there is too much knowledge and information residing in one person. We believe UCB must address this issue, which could take one or more of several forms:

Distribute More Systems Authority and Responsibility to Operating Departments

Some of this is already in place: Cataloging, for instance, can create load profiles. Acquisitions imports via FTP weekly files of brief records from Blackwell's. Many people have had "create list" training. But large files of incoming records are more typically imported and pre-processed by Systems, if we understand correctly. Communication with Innovative is centralized. Innovative's documentation for appropriate modules is accessible, but in general, staff in operating departments feel the need for more documentation and training. This may be difficult to deliver under the

current workloads, but this kind of empowerment of system users is essential to continued improvement.

Consider Hiring Another Systems Librarian/ILS Administrator

While we believe that distributing systems responsibility, especially at a supervisory or “super-user” level, could improve the present situation, it may not be sufficient by itself. It doesn’t address the issues of upgrades, re-indexing, hardware changes and concentration of knowledge; some of these simply have to be handled centrally. UCB might benefit from a discussion of the skills needed, perhaps at the Council level, before deciding how to proceed. Ideally, any new position would be structured as entry-level, with a premium on support for operating departments. It may be possible to identify a candidate from within one of those groups, and find a way to transfer a position to Systems. Or, this recommendation and the previous one might be combined: identify an administrator or “product manager” for each module, and leave them based in their departments.

Consider Establishing a Budget Line for IT

We raise this primarily because we don’t understand the origins of this practice. On the surface, it seems to discourage organized planning for IT services and growth. But we also understand that this may be dictated from outside the Libraries, and may lie outside its purview to change.

IV. Organizational Recommendations

Like many large academic libraries, the organizational structure at the University of Colorado-Boulder has evolved over a long period of time, in response to workflow demands, opportunities, budget pressures, and available skills. As with most libraries, departmental staffing has not kept pace with the changing information environment and workflows are less efficient than they could be. Even when tasks have been added (as for electronic resource management), the approach has been ad hoc, with little system-wide agreement or conformity, and with few organizational structures to support them.

In this section of the report, we propose changes intended to address the following issues:

1. The organizational structure reflects traditional print workflows, adjusted slightly to accommodate new tasks related to electronic resources. Except for the integration of Serials some 6-8 years ago, the structure of the Acquisitions department has remained largely unchanged for decades.
2. Less than 15% of technical services staff are dedicated to acquiring and creating access to electronic resources, even though patrons generally prefer accessing content electronically. In part, this is because Collection Development has filled the void, with an additional 2.5 FTE performing licensing, negotiation, and other acquisitions related functions.
3. Due to the recent retirement of the long term head, there is a lack of experience/expertise regarding the management of Acquisitions.
4. The Collection Development department is under enormous strain, with a wide range of responsibilities, some of which fall outside the typical sphere.
5. There exist organizational "divides" between faculty and staff; Cataloging and Acquisitions; Collection Development and Acquisitions; and between branches and Norlin.
6. The Administrative Cabinet is seen to be small, set in its ways, and slow to make decisions. Systems related issues are not well represented at this level of the organization, although they are increasingly fundamental to the management of the library.
7. In general, library management has avoided conflict and has allowed difficult personalities too much autonomy.
8. Decision-making has been largely consensual, which has tended to slow the process and eliminate opportunities for significant change. There is

considerable pessimism throughout the libraries about whether the administration has the will to adjust, even though the need is urgent.

In seeking to address these concerns, R2 believes the organization should:

- Reduce the staff time spent on managing print resources (so as to)
- Increase the library's capacity for managing electronic resources, which have in many ways already become the mainstream
- Strengthen the management of Acquisitions related functions
- Distinguish between mainstream and non-mainstream monographs workflows
- Validate the current direction of Cataloging and Metadata Services; increase the library's capacity for original cataloging and metadata creation and address cataloging needs in Special Collections, Archives, and Digital Initiatives
- Redefine the role of Collection Development and create organizational support for it
- Further integrate selection, description, and preservation of digital resources into mainstream operating units: Collection Development, Acquisitions, Serials, and Cataloging
- Be realistic and clear about Preservation strategies at UCB
- Clarify the role and increase the autonomy of various committees and councils; increase non-faculty involvement whenever possible
- Expand support for consortial participation, both within the Alliance and GWLA
- Expand the Administrative Cabinet from four to five members

More specifically, R2 makes the following organizational recommendations:

Integrate Collection Development and Acquisitions Functions

At the outset of this project, R2 was asked to consider the role of CD within the UCB Libraries and to suggest alternative scenarios. At present, as in many other ARL libraries, the Faculty Director for Collection Development is responsible for allocating monies and for coordinating the selection activities of subject bibliographers. As is true at UCB, it is typical that selectors do not report directly to the Head of Collection Development, requiring that she persuade, cajole, and maneuver to accomplish her agenda, but without real organizational authority.

Also, selection remains just one of many other critical tasks for which bibliographers are responsible, forcing it down in their lists of priorities. As a rule in academic libraries, we see Collection Development as a function that falls somewhere between Public and Technical Services, in a sort of limbo, with little support or control, except for budget allocations.

The growth and popularity of electronic resources has begun to change this picture, bringing the selection and acquisitions functions much closer together. Consortial deals, interdisciplinary packages, and license negotiations have as much to do with traditional Collection Development as with conventional Acquisitions and Access workflows. We suggest that UCB institutionalize this natural affiliation under one of three scenarios, which are also illustrated in the accompanying organizational charts.

Model 1: Create a Collections Services Group within Technical Services

In this model, Collection Development in its entirety would be combined with Acquisitions into a larger group. This Collections Services Unit would report through Technical Services. Bibliographers would retain their existing reporting lines for their primary responsibilities. For their selection responsibilities, they would, as now, have a dotted line to the Faculty Director for Collection Development; the only difference is that the function would be part of Collections Services. Budget allocations, participation in the Bibliographers' Advisory group, and other responsibilities would remain unchanged. Within Collections Services, this model envisions separate units for print resources, electronic resources, and collection support.

R2 sees many advantages to this model, and these are elaborated below. First and foremost, it recognizes that e-resources is now the mainstream, and that functions related to it need to be further integrated into Acquisitions and Cataloging—i.e., those areas where most staff hours exist, and where effort will be shifting steadily away from print. Second, given the new selection and ordering routines outlined above, Acquisitions and Collection Development will work more closely together than they have historically. Third, as activity shifts from print to electronic, this model allows great flexibility in moving staff to where the work and priorities are. Finally, this closer affiliation will help alleviate some of the trust and communication issues between the two groups.

Model 2: Bring Electronic Resources Management into Technical Services; Leave the Collection Development Function in Public Services

This model retains some of the advantages of the first, but leaves Collection Development in Public Services. In this scenario, e-resources responsibility would shift into the Cataloging and Metadata Department, where other synergies could prove useful. Print Acquisitions would report directly to the AD. This model still brings additional e-resources expertise into Technical Services, and provides a

mechanism (albeit somewhat more cumbersome) for shifting staff from print to e-resources as the workloads continue to shift. This model avoids potential issues in moving Collection Development out of Public Services. However, it requires very close coordination of e-resources activity in the gray area between licensing, consortial deals, trials, and ordering, payment and activation. These activities overlap to some degree also with Cataloging. If this is the path taken at UCB, it will be necessary to define these roles more clearly than at present, as staff support will be reporting through a different part of the organization.

In R2's view, Model 1 offers more advantages to the e-resources workflow and in the redefinition of collections more broadly, but we acknowledge that many additional factors will play a part in the final decision. Regardless of other decisions, we suggest that the most critical goal will be to relocate the management of e-resources in Technical Services; and to recognize it as a primary workflow.

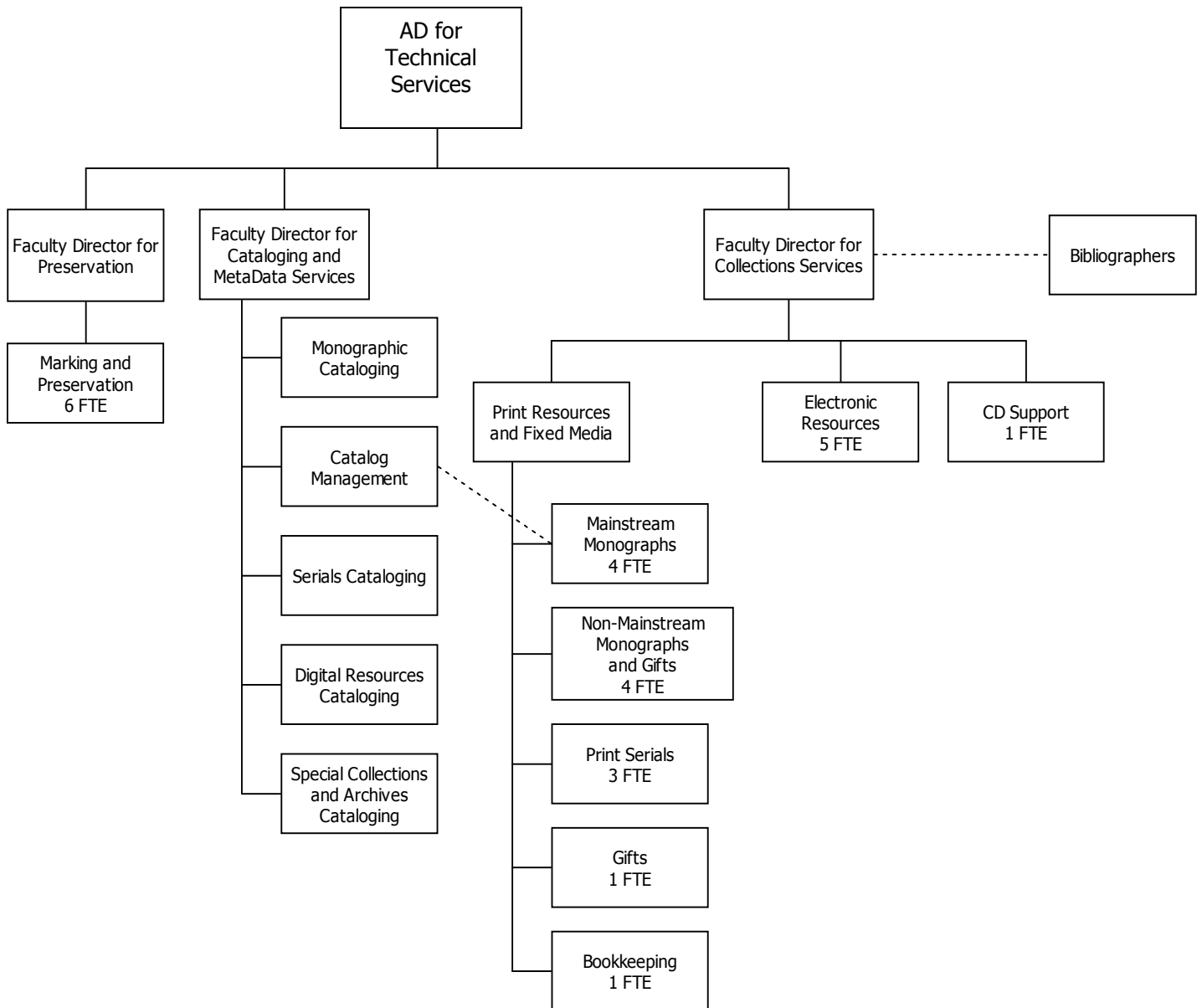
Relocate Electronic Resources Management

At UCB, the Faculty Director for Collection Development is already the key coordinator for identifying, negotiating, licensing, and acquisitioning electronic resources. In our experience, this is not typical, but understandable given the specific history of Acquisitions management over the last four decades. It appears that CD stepped in here, when Acquisitions did not.

A viable solution for some time, it is becoming less so as the volume of digital content grows and as workflows related to electronic resources demand more and more staff involvement. This work can no longer be managed by a single person with a small staff, no matter how capable. In many ways, E-Resources is now UCB's mainstream workflow, and staffing needs to reflect their volume and priority.

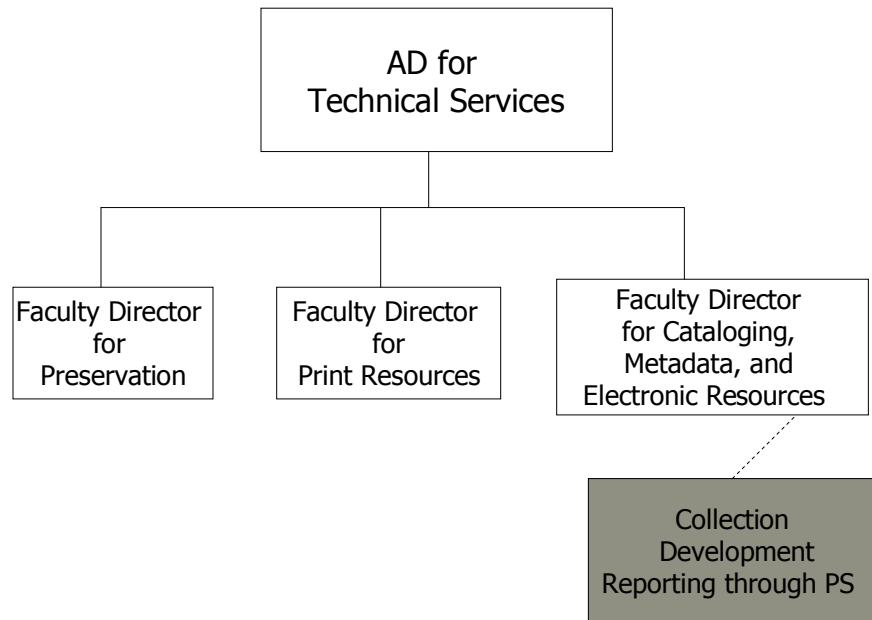
The population and implementation of the ERM system (and WebBridge, etc.) has exacerbated the problem at UCB, draining the small CD staff and begging the longer term question of "Who will be responsible for ongoing coordination and maintenance?"

R2 contends that the ERM, although it will be utilized by staff in various departments, is primarily an acquisitions workflow support tool, and its most appropriate home is in TS rather than PS. Although Serials Acquisitions, Cataloging and Systems have all played important parts in managing e-resources and planning for ERM implementation, most of the expertise related to trials, negotiation and licensing resides in Collection Development. Along with other CD functions, R2 recommends moving the ongoing management of electronic resources into Technical Services.



Model #1

Focus on Collections Services



Model #2

**Collection Development Reporting via PS
Electronic Resources Acquisitions Reporting via TS**

Expand Support for the Acquisition of Electronic Resources

Since this is now the mainstream, we see this to be one of the library's highest priorities. As we discussed while onsite, the ERM is nearly ready to launch. By staffing an ER Unit with a more robust (and fully dedicated staff), it will be possible for them to accept operational responsibility for the module and serve as the hotline for access resolution and other kinds of problem solving. Some level of production staffing in this unit will allow the head to investigate methods for harvesting scholarly statistics, and look forward to the next series of opportunities related to electronic resources.

We see this unit as being staffed by the two Electronic Resources Librarians, two serials acquisitions staff members, and one new member, relocated from serials receiving.

Reduce Staffing for Print Serials

R2 was surprised by the size and impressed by the obvious competence of the print serials receiving staff. As you may know, this function is often performed by students in other libraries, with one staff member overseeing their work. Knowing that the student budget is seriously constrained at UCB, we do not assume this to be a realistic option at this time. On the other hand, we must question the library's continuing investment in such high-level attention to serials check-in.

As described elsewhere, R2 believes that UCB should further reduce the volume of print subscriptions. Fully concede to user preferences and go e-only wherever possible. Additional streamlining, such as eliminating internal routing, will also help to reduce the workload. To be clear, we suggest this to be a place where the library can minimize staff supporting print, and maximize staffing for electronic serials. As mentioned above, we recommend moving one serials receiver to the ER team immediately. His/her familiarity with holdings and item records (for example) can be readily adapted to e-resources record maintenance; link checking; etc. As the stream of print serials continues to decline, be aggressive in moving additional staff away from this function toward the ER Unit or toward Cataloging and Metadata Services.

Note: The head of this unit should also accept acquisitions responsibility for print only subscriptions, and to coordinate with the ER unit on combined p and e titles.

Segregate Mainstream from Non-Mainstream Monographs Acquisitions

As described in the main body of the report, up to 29,000 monographic units currently acquired via Blackwell's Books Services should be selected within

Collection Manager, batch ordered, (or received on approval) and as many as possible should be received shelf-ready. This will require an entirely new orientation to the work, but once implemented we believe the acquisitions workflow for this stream (both ordering and receiving) can be managed by just two or three staff members (and some student support for opening boxes, etc.).

Because the new batch processes will diverge so fully from those required for non-mainstream monographs, we recommend staffing two discrete units. Even non-mainstream order processing, however, should be streamlined (eliminate double checking of order records, eliminate routine notes, etc.); vended more sensibly, claimed more systematically, and otherwise modified to better meet bibliographers' expectations and to reduce selection to order time frames.

Support the New Mainstream Workflow with Expertise from Catalog Management

As may be clear already, the new mainstream monographs workflows will require basic file management skills, exception processing, and some level of cataloging expertise. To better support the changed nature of the work, R2 recommends relocating one FTE from Catalog Management to Collections Management. We suggest that it should be his/her responsibility (with administrative support), to design and implement the new procedures. As well, it will be his/her responsibility to implement a formal quality control program (via sampling) for all third party records and processing.

Relocate Gifts from Public Services to Collections Services

R2 believes that it's time for UCB to modify its approach to gifts, as described elsewhere. By locating gifts management in Collections Services, the CD related filters and decisions can be more easily coordinated with the physical management of gift materials.

Reconsider Bibliographer's Assistants

Our expectation is that by streamlining the various monographs workflows, by implementing automated duplication control, and by redesigning the approval review shelves, etc. some bib assistant tasks will be reduced or eliminated by design. It also seems to us that many bibliographer support functions fall naturally into the realm of Acquisitions. The recommended merging of CD and TS will make it easier to coordinate these efforts. As we see it, much of it should be absorbed by dedicated members of the non-mainstream monographs team. In the end, it may be that the construct of the Bibliographer's Assistant is no longer needed allowing that time to be dedicated to more pressing concerns including the collection and synthesis of ER usage data, and other critical collection analysis tasks. These along with

any remaining bib assistance should be performed within the unit labeled CD Support (in Collections Services).

Redeploy Staff from Collections Services to Cataloging and Metadata Services and/or Systems

We estimate that two full-time staff members from Collections Services can be redeployed to Cataloging and Metadata as soon as the new workflows are in place. Conceivably, these two people (having come from Acquisitions) would have had extensive experience searching OCLC for usable copy. Some additional training could make it possible for them to be involved with the remaining 050 and 090 copy cataloging (in the backlog, Special Collections, etc.). If that is not necessary or appropriate, they can be trained and deployed to help with catalog maintenance tasks, holdings records, e-resource maintenance tasks, or possibly even scanning content for digitization—both for DIAL and the Institutional Repository—in Systems.

Expand Original Cataloging Capacity

As described in the workflow section above, the current lack of original cataloging capacity is of serious concern for the organization as a whole, with four professional-level vacancies in this area. If possible, R2 recommends filling at least two, including one cataloger for Asian or Middle Eastern Languages. Be careful to hire flexible catalogers with a production mentality that matches the one being developed within the department.

Redeploy Copy Catalogers

Upon adoption of PromptCat service, and after the backlog is cleared, several copy catalogers will be freed from the mainstream workflows. One should be relocated to Catalog Management (to fill the vacancy we created earlier). To the extent possible, others should be trained to perform more complex cataloging, thereby addressing the OC shortage. Beyond that, it may be possible to redeploy one copy cataloger to Special Collections and Archives, or Digital Resources Cataloging.

Consider More Non-Tenure Track Librarian Positions

R2 was impressed to learn that the UCB library falls near the bottom of all AAU Libraries in terms of professional staff per FTE students, and only a little further from the bottom in terms of total library staff per FTE students. In some ways, it must be said that the library does remarkably well, given these data. At the same time, we have to question the operational impact of tenure-track librarian positions in this already difficult situation.

If we understand correctly, there are very few non tenure-track librarian positions, and they are being categorically phased out. The research, publishing, and service components of tenure-track positions, while

advancing the profession and perhaps individual careers, rob the library of day-to-day management, production, and direct service provision. It will come as no surprise that many of those we spoke with are highly frustrated by the tenure related requirements, as they would much prefer to focus on their more tangible and rewarding library specific responsibilities. Tenure is of little consequence to many who are being required to seek it, yet it reduces their ability to contribute to the operation significantly.

While we agree that the tenure track should be an option for those who choose it (and perhaps a requirement for department heads), we wonder if it might be wise to make room for more non-tenured librarianship as well, particularly in production and/or front line management positions. Current operational demands as well as ongoing fiscal concerns seem to suggest the need.

Expand COG's Purview and Membership

A self-described "dinosaur" of a group, COG is a remnant of the library's original migration from CARL to Innovative Interfaces. As of now, it is the Chinook Oversight Group, charged with consideration of enhancement requests, setting priorities for new modules, and guarding against interdepartmental or other conflicts within the realm of the ILS. The ERM and WebBridge working groups are official off-shoots of COG.

As mentioned elsewhere, Millennium is just one of many inter-related systems which have critical dependencies and potential overlap. With just three or four additional members, this group should be asked to extend its oversight to a broader swath of systems and modules (including the RIOT tutorial system and the DIAL) and to act as an advisory group for systems more generally. It's likely that the WebOPAC group would/should remain a working sub-group, ensuring inclusion of the reference and patron perspective.

Perhaps this reconceived group could be called SAG (Systems Advisory Group), or TAG (Technology Advisory Group), or maybe even STAG (Systems and Technology Advisory Group).

Strengthen the Mission of the Library Council

As we understand it, this group of 20 librarians (plus the Dean) meets 4-6 times per year, and is chaired by the AD for Administrative Services. The Council serves in an advisory role to the Dean on non-collections issues. Ideas are discussed, members are brought up to date on various developments, and occasionally, a recommendation is made to the Cabinet. In general, group members have understood their primary role as advocates for their respective areas. Recent discussion topics have included the student budget, photocopying issues, and building refurbishments.

Council members expressed the following concerns about the structure and effectiveness of the council:

- This group is sometimes pre-empted by the Public Services Department Heads Meeting, and by the Bibliographers Meeting.
- This is the only regular meeting that brings together Technical Services, Public Services and Administrative Services; that opportunity should be used more fully than at present.
- This is not a decision-making group, although many feel that it should be.
- The council may be too large to be effective at decision-making.
- The 3 PM meeting time is not conducive to good/creative thinking; 11 AM would be a better time to meet.
- Lots of topics would be appropriate to this group, but members rarely (if ever) suggest agenda items.
- Members feel overloaded with other responsibilities and meetings to make the most of this one.

As a result of discussing this topic with the Library Council, and in response to their apparent enthusiasm for the idea, R2 suggest that a new charge could benefit the library. If deemed appropriate, the Council could become a more proactive, interdepartmental forum for establishing library wide policies and priorities. Importantly, this is the only regular opportunity for Public Services Heads, Technical Services Heads, Administrative Services and Branch Directors to meet together. On many topics (including collections related topics), Library Council should be the first or the primary forum for conversations that have heretofore occurred among PS Department Heads, TS Department Heads, and/or Bibliographers.

It is obvious to us that as the definition of "collections" continues to evolve, system-wide coordination will become increasingly critical. In response to this need (and because of the broad, interdepartmental representation on Council), R2 recommends that this group be charged with a new mission and empowered to make library-wide decisions; both collections and non-collections related. After all, all the Cabinet members (including the Dean) are also members, and would have obvious veto power.

A new charge of this kind will require that Council members set aside personal or departmental agendas in favor of bold, library-wide thinking and problem solving that will promote strategic initiatives. For this to be possible, it may be necessary to reconsider (shrink?) Council membership. It may also be necessary for the group to meet more often, to meet during morning hours, and to lessen the number or frequency of competing meetings.

As a first task under a new charge, it may be apt for the Library Council to coordinate the library's evaluation of the R2 Report. This group could coordinate discussions at various levels, collect and organize staff feedback, evaluate and prioritize recommendations, communicate broadly and often, and eventually focus on implementation, which may include the creation of one or more implementation teams.

Other new Council topics/tasks might include:

- Reconsider/redefine "collections" at UCB
- Discuss the bibliographers' changing role as related to CD
- Establish benchmarks for service/throughput
- Define and plan for the IR for UCB
- Establish realistic goals for physical and digital preservation

Expand the Cabinet to Include the Systems Viewpoint

Regardless of the role defined for the Library Council, the Dean's Cabinet will continue to fill a critical administrative need. If we understand correctly, the Cabinet's composition has been static for more than 15 years. In the meantime, the library environment has changed dramatically. One of the most profound changes has to do with the increasing primacy of systems and systems integration. As mentioned above, the ILS is now just one of many critical components of the library's core research and delivery service, which includes any number of local, remote, and commercial systems/entities.

As the library increasingly points to content rather than housing it, and as commercial search engines are used to locate and create access to UCB content, sophisticated local systems and a shared understanding of their design must become a central administrative concern. To this end, we suggest expanding the Cabinet to include the Faculty Director for Systems.

Further Develop UCB Strategies for Consortial Participation

UCB's membership in the Alliance offers both pluses and minuses. Prospector and PASCAL have clearly succeeded. The Alliance provides UCB with significant discount advantages on e-resources and other purchases, and this benefit often extends to other UC campuses. Priority ILL and document delivery arrangements are well-developed. A selection has been finalized for a shared IR platform, and trial of a shared purchase plan begun. Additional consortial initiatives take place through GWLA, including a model license program, print archiving, and digitization of government publications.

While the benefits are significant, so too is the UCB time and effort invested, especially in Collection Development, Cataloging and Systems. Collaboration can also introduce complexity and uncertainty in long-standing procedures—the detailed changes related to the shared purchase plan are a good example. Occasionally, there are unforeseen consequences to working together, such as the recent Prospector slowdown caused by a large UCB batch load of Serials Solutions records.

UCB's role as the largest member carries a somewhat disproportionate load of responsibility, while it enjoys somewhat less benefit than the smaller institutions. The Alliance must be factored into most local decisions, which in some cases limits the options open to UCB. UCB's commitment to act as the payer for e-resources also requires that UCB invoice and collect payment from other participants. Content development for the shared IR is clearly in need of leadership, and in all likelihood other Alliance members are looking to UCB to provide that leadership.

Collaboration on this scale is always difficult, and often valuable. We certainly support such initiatives, but want to acknowledge the time commitment required—and the likelihood that it will grow, especially in relation to the IR.

In some ways, the Alliance seems ripe for still more collaboration. We suggest some further strategic discussions take place—initially among UCB staff only. No doubt a great deal of this has already happened, but given the massive changes in the information environment—especially in regard to discovery paths and workflows---the continued evolution of the Alliance and UCB's role in it seem worth revisiting.

As a first topic, we suggest discussion of the benefits of developing Prospector as a fully shared catalog, with a single master bibliographic record for each item. This would allow titles held in common to be cataloged once within the Alliance, increasing cataloging capacity throughout the Alliance. It would also spread the cost of enrichment with TOCs, or outsourced records for e-journals across more libraries.

V. Projected Benefits and Costs

For the purposes of the following estimates, R2 assumes that UCB will implement all or nearly all of our recommendations. We recognize that to be unlikely, and have tried to provide enough detail so that these numbers and projected outcomes can be adjusted to coincide with the recommendations the Libraries do decide to pursue. We have tried to indicate our assumptions clearly, but please recognize that these are estimates. Please note that we have assumed an 80% PromptCat hit rate in these calculations. It is more likely that UCB will experience hit rates higher than that, but we prefer to understate the impact, as a contingency for unexpected complications.

Improved Timeliness of Ordering & Receipt

- Selection to order in 24-48 hours for 8,000 titles (BBS firm orders)
- Fund encumbrances accurate with 24-48 hours
- Eliminate checking of order requests in Acquisitions/daily release (1+ days)
- Receipt to shelf in 1-3 days for 9,600+ titles (80% of BBS firm + Science AP)
- Receipt to shelf in 10-14 days for 13,600 titles (80% of non-Science AP; assumes 7-day review plus time in Cataloging and Marking. More titles from this group will shift to the 1-3 days as additional profiles go shelf-ready)
- Eliminate most patron holds (due to backlog reductions and faster throughput)

Reduced Workloads (Annual)

- Eliminate order tracking for 8,000+ items in various selector shadow systems
- Eliminate item-by-item searches:
 - In Chinook: 29,000
 - In Collection Manager: 8,000
 - In OCLC: 29,000
- Eliminate keying or item-by-item download of 8,000 bib records at order
- Eliminate item-by-item fund assignment for 21,000 approval books
- Eliminate manual creation of 8,000 purchase order lines
- Option to incorporate e-monograph selection into print procedures
- Eliminate keying of 8,000+ invoice lines (BBS firm orders + European vendors)
- Eliminate manual item record creation for 12,000 titles (Science APs + firm)
- Eventual elimination of manual item record creation for another 17,000 units
- Reduce copy cataloging by 23,200 titles (80% of BBS volume)
- Reduce OCLC charges for searching, download, cataloging, setting holdings
- Reduced need for rush ordering and rush processing
- Reduce receipt to shelf time by 4-8 weeks
- Eliminate physical processing for 23,200 items, in phases:
 - BBS Firm Orders 6,400
 - Sciences Approval Plans: 3,200
 - Other Approval (in 2007-8) 13,600
- Eliminate status changes for 12,000 items (default to available) immediately

- Eliminate status changes for 23,200 items as shelf-ready component grows
- Eliminate keying of invoices into PeopleSoft (2007-8 or later)

Expenses/Offsets

- \$58,000 PromptCat charges (est. 29,000 items @ \$2.00)
(Offset by reduction of current OCLC charges?)
- \$24,000 Physical processing (est. 12,000 items @ \$2.00)
- \$??? Purchase of Innovative MARC Loader Without Invoice (one-time)
- \$??? TOC and other OPAC enrichment
- \$??? Outsourced Authority Control Processing
- Testing, implementation, documentation of new procedures

Frees Time for Higher Priorities and New Opportunities

- To reduce the cataloging backlog of new material
- To implement quality control on PromptCat and shelf-ready books
- To improve performance on non-mainstream orders
- To shift additional hours to e-resource maintenance
- To make progress on cataloging backlogs in Special Collections, Archives, Documents, etc.
- To continue with retrospective conversion (as needed)
- To identify resources for DIAL
- To identify resources for the Institutional Repository
- To identify resources for technology support

VI. Implementation

As the length of this report attests, R2 seeks to provide the broadest possible range of recommendations. We expect that some of them will challenge existing practices and even values. We fully understand that the University of Colorado Library administration and staff must evaluate them, and decide which can benefit your organization. Some will be ignored or discarded, others modified to better fit your environment. But we urge careful consideration of them, because we know they can create new capacity within your operations, even as they push you beyond your organizational comfort zone.

We estimate, conservatively, that implementation of most of these recommendations represents many months of concerted effort. It will be important to think about how to sequence them, and to accommodate dependencies and communication with participants inside and outside the Libraries.

In the following chart, we've listed all our recommendations, indicating for each whether we think it should be addressed in a first or second phase of implementation. Primary recommendations are those "low hanging fruit" that seem most obvious, may already be underway, or may provide the biggest/most immediate benefits in terms of freeing capacity. In some cases, they are required first steps, upon which others hinge. Secondary recommendations will be somewhat more difficult but may offer even greater advantages for the long term. We like this model because it can serve as a brainstorming/prioritizing rubric, and can suggest first, second and even third steps in a staged implementation.

In our opinion, the recommendations likely to have the highest immediate yield are these:

- Adoption of electronic selection, PromptCat and shelf-ready services for Blackwell's firm orders; PromptCat for all approval plans; shelf-ready for Science and Technology approval profiles
- Amalgamation of Acquisitions, Collection Development, and E-Resources into Collections Services, reporting through Technical Services
- Distribution of additional systems responsibility and authority to operating departments
- January 15th implementation of ERM and WebBridge Phase 1

If UCB took only these steps, R2 believes it would realize most of the benefits outlined above.

#	Page	Recommendation	Primary	Secondary
		Acquisitions/Collection Development		
1	13	Instruct BBS to Ship Books by Profile	•	
2	13	Require Electronic Selection for Titles Handled by Blackwell's	•	
3	14	Purchase and Install Innovative's "MARC Loader Without Invoice"	•	
4	14	Export Bibliographic and Local Data from Collection Manager to Millennium	•	
5	15	Rely on Collection Manager, Blackwell's and Millennium for Duplication Control; Eliminate Most Pre-Order Searching	•	
6	15	Minimize Free-Text Notes in Order Records	•	
7	15	Provide Monthly Reports of "Held" Orders to Bibliographers	•	
8	16	Release EDI Orders to Vendors Daily	•	
9	16	Eliminate All Selector "Shadow" Systems		•
10	16	Improve Performance on Non-Mainstream Orders	•	
11	16	Implement PromptCat, Shelf-Ready and Electronic Invoicing for All Blackwell's Firm Orders	•	
12	18	Implement PromptCat, Shelf-Ready and Electronic Invoicing for All Approval profiles in Science and Technology	•	
13	19	Reduce Time for Bibliographer Review from 14 to 7 Days		•
14	19	Change Default Decision for Approval to "Accept if No Action"		•
15	19	Consider Establishing a Central Fund for Approval		•
16	20	Implement PromptCat and Electronic Invoicing ONLY for Non-Science Approval Plans. When Returns Reach 5% or Lower, Implement Physical Processing		•
17	20	As Shelf-Ready Services Are Adopted for Approval, Eliminate Review Shelves in Favor of Web-Based New Books/Resources Lists		•
18	21	Expand Electronic Invoicing	•	
19	21	Reject New Books that Arrive Damaged	•	
20	22	Eliminate Unsolicited Gifts Except in Special Collections and Music	•	

#	Page	Recommendation	Primary	Secondary
21	23	Train Acquisitions Staff to Recognize Series More Accurately	•	
22	23	Implement the Innovative External Accounting Interface	•	
23	24	Continue to Reduce Print Serials	•	
24	24	Consider Reduction of Check-In, Claiming and Binding for Some Serials	•	
25	25	Review Serials Binding Criteria with a Goals of Reducing Activity by 20%	•	
26	25	Allow Serials Check-In Staff to Enter ISSN in the Catalog Record		•
		Cataloging		
27	27	Accept Duplicate Call Numbers	•	
28	27	Eliminate Cataloging Backlogs of New Material	•	
29	28	Purchase ToCs from Blackwell's		•
30	28	Outsource Authority Control Processing	•	
31	28	Minimize the Number of Serial Titles Classed Together	•	
32	29	Familiarize Catalogers with Non-MARC Metadata Formats	•	
33	29	Increase Original Cataloging Capacity	•	
34	29	Increase Complexity of Cataloging for Copy Catalogers		•
35	29	Shelve Books with Brief Records		•
36	30	Outsource Non-Roman Cataloging	•	
37	31	Consider Alternative Cataloging Standards for Some Formats		•
38	31	Catalog Theses Only to the Level Needed	•	
39	32	Maintain PCC Contributions to the Extent Possible	•	
40	32	Eliminate Routine Review of PCC Contributions	•	
		Electronic Resources		
41	33	Ramp-Up Implementation of ERM	•	
42	33	Assign Ongoing Maintenance/Operational Tasks	•	

#	Page	Recommendation	Primary	Secondary
		Music		
43	35	Extend Ordering Authority in Millennium		•
44	35	Allow Local Receiving for Some Materials		•
45	35	Investigate Cataloging and Processing for Music		•
		Periodicals Room/Reference		
46	37	Reduce the Size of the Print Reference Collection		•
47	37	Eliminate Reference Sub-Locations	•	
48	37	Reconsider In-House Routing of Periodicals	•	
49	38	Clarify Timing and Impact of the "One-Desk" Initiative	•	
50	38	Reconsider Check-In in Periodicals Room		•
		Marking		
51	39	Eliminate Branch Inconsistencies Where Possible	•	
52	39	Eliminate Physical Books Plates		•
53	40	Plan to Work without Inscribed Call Numbers	•	
		Preservation		
54	42	Formalize Preservation Goals at UCB	•	
55	43	Ensure Clarity Concerning Preservation Expectations		•
		Systems		
56	44	Increase Capacity of Systems to Support the Library Operation	•	
57	44	Distribute More Systems Authority and Responsibility to Operating Departments	•	
58	45	Consider Hiring a Systems Librarian/ILS Administrator		•
59	45	Consider Establishing a Budget Line for IT		•
		Organization		
60	47	Integrate Collection Development and Acquisitions Functions in TS (Call it Collections Services)	•	
61	49	Relocate Electronic Resources Management	•	
62	52	Expand Support for the Acquisition of Electronic Resources	•	
63	52	Reduce Staffing for Print Serials		•

#	Page	Recommendation	Primary	Secondary
64	52	Segregate Mainstream from Non-Mainstream Monographs Acquisitions	•	
65	53	Support the New Mainstream Workflow with Expertise from Catalog Management	•	
66	53	Relocate Gifts from Public Services to Collections Services		•
67	53	Reconsider Bibliographer's Assistants		•
68	54	Redeploy Staff from Collections Services to Cataloging and Metadata Services and/or Systems		•
69	54	Expand Original Cataloging Capacity	•	
70	54	Redeploy Copy Catalogers		•
71	54	Consider More Non-Tenured Librarian Positions		•
72	55	Expand COG's Purview and Membership	•	
73	55	Strengthen the Mission of the Library Council	•	
74	57	Expand the Cabinet to Include the Systems Viewpoint		•
75	58	Further Develop UCB Strategy for Consortial Participation	•	

VII. In Closing

Recommendations from outsiders can have enormous value, but naturally they have limitations. Our observations and ideas are based on only a few days' immersion in UCB's processes, systems, and culture. We're certain that we've mistaken some of what we heard and saw, and that our recommendations will need scrutiny by those of you closest to the situation.

We look forward to discussing this report in more detail, once you've had time to read it. We thank the staff at the University of Colorado Libraries for participating in this process. Although there is a great deal of opportunity for improvement, the UCB Libraries have been built on a strong foundation, through the efforts of many dedicated people. Our recommendations seek to build on that foundation and accelerate UCB's transition to its next generation of library services.