

Storage Facility or Shared Print Archive?

Evaluation of Minnesota Library Access Center (MLAC),
future scenarios, and recommendations for a strategic plan

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REPORT TO THE MLAC ADVISORY BOARD:

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Executive Summary

The Minnesota Library Access Center (MLAC) – the state-funded cornerstone in Minnesota’s efforts to preserve and provide access to knowledge and culture -- is 89% full. The academic and public libraries throughout the state, including the University of Minnesota Twin Cities Libraries (UMTC), are at or beyond their local collection capacity. Based on the current fiscal environment it is highly unlikely that there will be any significant library construction in Minnesota, including at UMTC or MLAC in the foreseeable future. While aggressive digital library developments have slowed the natural accretion of volumes in our libraries, there is a continuing need for a statewide strategy to preserve the scholarly record represented by traditional resources and to provide efficient access to them for all Minnesotans and beyond.

To assist the MLAC Advisory Board (the Advisory Board) in determining the best use of the remaining MLAC space and to recommend strategic directions for future preservation and access efforts, consultant Sam Demas and an MLAC Evaluation Task Force were charged with preparing a report to guide the Advisory Board’s strategic direction. This report is conceived as a roadmap addressing future space needs for preservation and an expanded role for Minnesota’s academic and public libraries within a larger national context. It recommends re-positioning MLAC to play a leadership role as a vital hub in a shared print archiving program.

An environmental scan suggests that developments over the past decade make such a re-positioning likely to succeed:

- a. an enormous (and growing) corpus of digital surrogates makes it possible to provide digital access to a large share of and preserve digital copies of traditional library materials, while retaining print versions as backup and for their artifactual value,
- b. a conceptual shift from a focus on managing local collections to thinking of collection management as a national, system-level collaborative challenge is prompting unprecedented action in shared collection management,
- c. the emergence of national and regional initiatives to cohere a coordinated approach to “ensuring long-term survivability of the

- scholarly record at a cost that is sustainable for the research library community as a whole”¹; and
- d. early activity in the development of business models and cooperative agreements to transform the nation’s storage facilities into a network of shared print management hubs or service centers that form the nucleus of a shared national collection.

Part One of this report provides a sketch of the situation and outlook for a national shared print archiving program. This section summarizes current conceptual thinking, outlines programmatic activity, and notes key challenges.

Part Two presents evaluation and analysis of MLAC today in relation to its possible futures. To chart the possible future course of MLAC from a *de facto* storage facility with service components to a proactive service hub in a national program will entail updating MLAC policy, governance, management, and administration, and an intensive period of collection management (de-duplication, withdrawals, and shaping a collection profile that builds on collection strengths and responds to national needs). Detail to inform Advisory Board deliberations on these matters is included in the appendices.

Part Three discusses options for making the best use of space remaining in MLAC and for creating new space. A preliminary cost analysis of \$175,000 is presented for the cost of de-duping 2/3 of the duplicate monographs and 40% of the duplicate serials. Combined with remaining space for about 206,000 volumes, this would create space for up to 822,000 monographic volumes in MLAC. A chart comparing the costs of four different options for creating more space in MLAC indicates that withdrawing duplicates is the most cost-effective, but yields only a fraction of the space afforded by the other options.

Three future scenarios are posited for MLAC:

1. Status Quo: Maintain status quo as a Minnesota-centered facility and adjust policies and operations slightly.
2. National Service Hub: Position MLAC to serve as a hub within a national shared print archiving program, operating with a joint collection management plan and a collection profile that can support a viable business model.

¹ Constance Malpas, *Cloud-sourcing Research Collections: Managing Print in the Mass-digitized Library Environment* (Dublin, Ohio: OCLC Research, 2011), p. 66
<http://www.oclc.org/research/publications/library/2011/2011-01.pdf>

3. National Service Hub Alternative: Same as #2, but with a distributed archiving program, a statewide shared catalog, and an expanded service program, including digitization program.

Scenario Two is recommended, and a case is made for a collection profile focusing on little-used, widely held monographs. The rationale for this recommendation is outlined on pages 38-40. The feasibility of this labor-intensive recommendation is dependent upon the cost-effectiveness of de-duplication of MLAC and of withdrawal of materials outside that profile that are securely archived elsewhere. There is a crying need nationally for research to determine the cost/benefit of large-scale collection management in a storage facility, and it is recommended that MLAC take the lead in working to fill this need.

In Part Four suggestions are made for the recommended strategic directions for MLAC:

1. Develop vision, mission, governance and policies that support a role for MLAC as a shared print management hub.
2. Generate and analyze data needed to refine the niche and the scale of MLAC's role as shared print hub.
3. Analyze and strengthen capacity to participate as a shared print hub.
4. Develop a proactive collection profile, policy and management plan.
5. Partner with CIC, HathiTrust, and others to define MLAC's role as a shared print management hub.
6. Identify possible new services related to MLAC mission.
7. Review financial model in light of changes in mission, policy, governance and operations.

In Part Five next steps for Advisory Board action are suggested.

Finally, in Part Six a *Framework for the Future of MLAC* briefly outlines future directions the Advisory Board would like to pursue based on its February 23 discussion of this report.

Acknowledgements

My work was deeply enriched by conversations with many wonderful colleagues, both within Minitex and the University of Minnesota Twin Cities Libraries, and nationally. I am grateful for the perspective, counsel and information so generously shared by so many colleagues.

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Nationally, we are on the cusp of a new era in cooperative collection management. Colleagues throughout the nation were unfailingly generous with their time and knowledge as I sought information, advice, perspective and inspiration. These include: Gohar Ashoughian (University of Northern British Columbia), John Berger (AESRL), Lea Currie (Kansas), Bob Horton (MHS), Eileen Henthorne (ReCAP), Michael Homan (Mayo), Bob Keift (Occidental), Ross Housewright (Ithaka S+R), Bruce Hulse (WRLC), Dan Iddings (PALCI), Zack Lane (Columbia), Chris Loring (Smith College), Constance Malpas (OCLC Research Services), Cathy Martyniak (U of Florida), Dennis Massie (OCLC/RLG), Janet McCue (Cornell), Mary Anderson Ochs (Cornell), Barclay Ogden (UC Berkeley), Lizanne Payne (Consultant for Center for Research Libraries and for WEST), Bernie Reilly (CRL), Mark Sandler (CIC), John Saylor (Cornell), Roger Schonfeld (Ithaka S+R), Michael Stoller (NYU), Dona Straley (Ohio State), Matthew Sheehey (Harvard), Emily Stambaugh (California Digital Library), Marvin Tillman (Duke), Bob Wolven (Columbia).

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With gratitude to all for their invaluable input, I take full responsibility for the results of my work and any errors therein.

Sam Demas, Northfield, Minnesota

Introduction

And what nobler purpose can there be for a University than to gather up the prizes of a culture, preserve them, propagate them, make them available so that the best of what has gone before can be preserved and built on.

Remarks by Governor Elmer L. Andersen
at the 2000 dedication of the
Elmer L. Andersen Library
and the Minnesota Library Access Center (MLAC)

As the MLAC cavern approaches its physical storage capacity, it is worth noting that Governor Andersen's words presaged a potential new horizon for MLAC: *propagating* the collective collection by aligning its print preservation strategies with the growing corpus of digital surrogates. Few at the dedication could have envisioned that, in a mere 10 years, digital surrogates of over 8,000,000 volumes from research collections would reside in a collectively owned HathiTrust. In 2000, we could only dream of the potential this offers for providing 24x7 internet access to a substantial portion of the contents of MLAC.² Today, we are on cusp of an unprecedented preservation and access synergy between print and digital versions of the scholarly record. This potential for "dual duplication" -- access to both digital and print versions of the same work -- builds on what MLAC has created in its first ten years and markedly advances the hopes and dreams of those who made MLAC possible.

In recounting the political struggle to secure funding for MLAC, Don Kelsey and Bill DeJohn emphasize that one of the pivotal arguments in convincing skeptical legislators was that "... [the storage center] had the potential to reduce crowding in the libraries in their legislative districts. The storage center held out the hope for them that there would be fewer requests for library construction in the future."³

In the present economic climate, and with MLAC nearly full and no prospect of building another cavern, it is imperative that we find ways to renew the hope that we can preserve and provide access to the scholarly record. Doing so without new library construction, and in ways that minimize the substantial

² It must be noted that, until the Google Books legal settlement is finalized and approved, in-copyright materials, the overwhelming majority of these 8 million volumes, are not viewable in the HathiTrust.

³ Don Kelsey, "The Elmer L. Andersen Library: Accomplishing the Impossible," *Library Trends*, 52 (1) (Summer 2003): 49-59.

ongoing overhead cost of storing legacy collections, will require a degree and scale of cooperative collections management unthinkable ten years ago. Remarkably, this possibility appears to be within our grasp due to a conceptual shift in how we think about our collections: as part of a national shared collection, rather than primarily as local resources.

The implications of this shift for MLAC are profound. Even as the MLAC cavern fills, the potential of a new epoch for MLAC as a shared print archive beckons. This study explores how MLAC might participate and provide leadership in a larger national effort toward “the worthy goal of ensuring long-term survivability of the scholarly record at a cost that is sustainable for the research library community as a whole.”⁴

Process and timeline of this planning study

The idea of conducting this study grew, in part, from seeds planted in discussions at the 2008 meeting of the MLAC Advisory Board and, also, from a 2010 preservation planning study Demas conducted for the University of Minnesota Twin Cities Libraries. In it, Demas observed that the development of MLAC was one of the most important investments UMTC Libraries had ever made in preserving its collections and that “the single most important and immediate contributions the Libraries could make to the national [preservation] effort would be to develop the policy framework to turn MLAC into a proactive repository in the next year.”⁵

The present study began with several discussions among Bill DeJohn, Sam Demas, and Wendy Lougee in mid-September 2010 to establish the purposes and scope of the project. See Appendix 1 for a statement of the scope of work and for the charge to the MLAC Evaluation Task Force. Sam Demas commenced work as consultant at the end of September, and the project concludes by March 1, 2011. Sam played two roles in the process, one as a member of the MLAC Advisory Board in his capacity as College Librarian at Carleton College, and the other providing leadership, writing this report and making recommendations as principal of Sam Demas Collaborative Consulting.

The MLAC Advisory Board met on October 21, 2010, to discuss a wide range of topics related to this study and to hear from Sam Demas and Wendy Lougee about initiatives underway related to print resources in storage facilities and

⁴ Malpas (2011) op cit., p. 66.

⁵Samuel Demas, *Enduring Access to University of Minnesota Libraries Collections: a preservation planning framework for a digital age*, (unpublished consultant’s report, February 2010): 29. <http://z.umn.edu/p5>

emerging schemes for shared print archiving. Demas led a discussion of the issues faced in planning for the future of MLAC, followed by a straw poll to get a preliminary sense of the Advisory Board member's opinions on key issues. The results showed that among Advisory Board members:

1. nearly all are out of space for collections or will be soon;
2. there is a clear sense that we should explore the idea of becoming a shared print archive;
3. nearly all believe we should implement a retention commitment of 25 years, and only a few were in favor of shared ownership;
4. there did not seem to be any significant legal or political barriers to reaching agreement on how to manage a shared collection.

The Agenda and Notes from this meeting are attached as Appendix 2, and Sam's Power Point slides (along with other project documents and recommended readings) on the Minitex (and UMTC Libraries) wiki site:

<https://wiki.Minitex.umn.edu/MLAC> Evaluation Task Force.

The MLAC Advisory Board met again on February 23, 2011, to discuss the draft report and identified an initial set of next steps that are outlined in the final section of this report. In this meeting additional straw polls were conducted. These are outlined in the Next Steps section of this report.

The MLAC Evaluation Task Force met on November 1, December 13, January 14, and February 4. In the first meeting, two subgroups were formed, one to investigate the extent of duplication in MLAC and cost/benefit of de-duping, and another to study the cost/benefit of installing compact shelving in the MLAC cavern.

MLAC Today: a thumbnail sketch

The Minnesota Library Access Center (MLAC) was funded by the state legislature in 1997 and opened in 2000 as a state-wide storage facility that provides "a secure, climate-controlled environment for high density storage of important but less frequently used collection[s] owned by libraries throughout Minnesota. Materials in MLAC are available to all Minnesota residents and students."⁶

The MLAC cavern is one of two caverns dug into the limestone bluffs beneath Andersen Library on the West Bank of the University of Minnesota's Minneapolis campus. Like the Global Crop Diversity Trust in Norway, which was built to store over 4,000,000 seed samples against the possibility of a global

⁶ MLAC Packet for Depositing Libraries, December 2002, p. 2

doomsday, the MLAC caverns, an engineering marvel, were designed to retain optimal environmental storage conditions with minimal reliance on energy. The first cavern, occupied by UMTC Libraries special collections materials, is not part of MLAC.

The MLAC cavern is equipped with Harvard-depository style high bay, high density shelving, with an estimated capacity of 1,570,000 volumes. Sixty percent of the MLAC cavern is dedicated to UMTC Libraries materials and 40 percent to deposits from 20 other libraries statewide. A list of depositing libraries is included as Appendix 3. Seventy-one percent of the materials in MLAC are from state-supported institutions (99% of this material from higher education institutions), 14% from public libraries, and 15% from private institutions. MLAC is unique among North American storage facilities in containing materials from such a large and diverse set of libraries. Its business model is also somewhat unique. Operational costs are funded by the state of Minnesota, and no charges are made to depositing libraries or borrowing libraries. Most storage facilities operate on a cost-recovery basis with charges levied to depositing institutions based on the number of items deposited.

STATUS OF MLAC CAVERN STORAGE CAPACITY

	Total MLAC capacity	Volumes deposited to date	% Filled to date	Volume capacity remaining
UMTC deposits (60%)	998,016	831,696	83.3%	166,320
Non-UMTC deposits (40%)	610,421	570,461	94%*	39,960*
TOTAL	1,570,000 (est.)	1,402,157	89%	11% or 206,280 vols.

[*Theoretically, MLAC has existing “commitments” to take an additional 39,000 volumes from Mayo Clinic, Legislative Reference Library, Bethel Seminary, and Saint Scholastica. Adding these yet-to-be accessioned volumes would effectively make the Non-UMTC section of MLAC more than 98% full.]

MLAC is a classic *de facto* collection⁷ comprised of material representing a wide range of subject areas. Of the materials currently in MLAC, 44% are serials (615,334 volumes), and 56% are monographs (790,483 volumes). We do not have a subject analysis of the collection, but know that some of the largest concentrations of materials are:

1. Law series (including Code of Federal Regulations, Minnesota Briefs, and deposits from the State Law Library);
2. Monographs, especially literature;
3. Journals runs;
4. Theses;
5. Agriculture materials (monographs and journals);
6. Reference series (e.g. abstracts and indexes, many available online);
7. Medical materials from Mayo Clinic library
8. Children's literature (frequently accessed)

MLAC items are accessioned into the UMTC Libraries' online catalog. Materials are stored under very good conditions in terms of security and environmental controls. MLAC operations appear to be efficient, highly service-oriented, and adhering to best practices.

The general challenges facing MLAC are outlined in the two *Charges* in Appendix 1, and the particular strengths include:

1. A multi-type facility open to deposits from all Minnesota libraries and collections accessible by all, whether they have deposited materials or not;
2. Solid funding from state and lack of fees for depositing libraries;
3. Excellent service ethos of staff;
4. Speedy, reliable delivery capacity by the Minitex Delivery System and UMTC Libraries' delivery of materials on the Twin Cities Campus;
5. Efficient operations;
6. Better than average bibliographic records;
7. Journal holdings for individual titles are clustered together (rather than spread throughout the facility), making for more efficient collection management;
8. Good security and environmental conditions.

⁷ *De facto* is the term used by Lizanne Payne to describe storage collections comprised of an unplanned, miscellany of low-use materials, usually moved to storage in a hurry to alleviate urgent collection needs in on-campus, open stack libraries. This is in contrast to an intentional storage collection (something very rare) based on a subject, genre, or other profile that allows one to better understand and characterize the content and nature of a storage collection, and to more easily determine its relationship to other storage collections.

Part 1: Shared Print Archiving: an environmental scan

Research libraries are on the cusp of cohering a national strategy for collection management in a digital age. Until very recently the primary collection management strategy for libraries running out of space was to transfer lesser-used materials to less costly high-density storage. Reluctant to discard materials and pressed to make decisions quickly, universities have rapidly filled most of the approximately 80 storage facilities in North America with an uncoordinated hodge-podge of low-demand print materials, often including both duplicates and scarcely held titles. Today, the advent of a growing corpus of digital surrogates of the very books and journals in our open stacks and in our storage facilities is prompting a fundamental reconsideration of collection management strategies. New approaches are focusing on a shared approach to preserving and making accessible a national shared collection of low-use print materials, and on defining new roles for at least some of the nation's storage facilities as hubs in a shared print management network.

An emerging cornerstone of this new strategy is captured in the concept of “dual duplication”, i.e., the twin availability of the same titles in both print and digital form. Organized on a large scale, this would allow us to link the contents of our storage collections to the growing digital corpus, thereby gaining, the “dual duplication” benefit of both preserving and providing access to two complementary formats for the same titles. Dual duplication seems to offer a more nearly optimal approach to addressing the vexing challenge of balancing the need for both access and archiving expectations for stored materials.⁸

This is a propitious moment for MLAC to undertake strategic planning and to situate itself in the broader national context. The best way to get a good sense of developments in the rapidly moving field of shared print archiving is to read the articles and reports posted on the MLAC wiki site for this planning study. In addition, this environmental scan offers a quick sketch of shared print archiving, the key factors and trends driving it, the challenges and potential perils, and major initiatives and players. Far from being a comprehensive analysis, it is a brief outline of highlights in the backdrop against which MLAC's future should be envisioned.

⁸ The term dual duplication emerged in the discussions surrounding Constance Malpas' study *Cloud-sourcing Research Collections: Managing Print in the Mass-digitized Library Environment* as shorthand for the concept of basing shared print archiving on the availability of dual, complementary formats. Personal communication with Constance Malpas, February 2011.

What is Shared Print Archiving?

1. The idea of shared print archiving is that with widespread digital access, “libraries could share their print storage, keeping only several copies nationally or regionally, rather than duplicating substantial swaths of their collections...the savings from sharing of this kind could be substantial⁹.”
2. The idea of sharing responsibility for print storage and access prompts and supports a re-conceptualization of collections, moving from the traditional emphasis on local collections as free-standing silos to one of managing our local collections as a collective resource in support of scholarship nationally.
3. The purpose of shared print archiving is to ensure the most cost-effective preservation of the print record through a coordinated system of shared responsibility. In other words, shared print archiving seeks to maintain and ensure the existing national breadth and depth of collections while thoughtfully “managing down” unnecessary duplication in the system.
4. This approach is based on the notion that our research collections “deliver maximum value when managed as a network resource”¹⁰ and that the “value to the academic enterprise is less as a locally-owned asset than as a pooled resource”¹¹.

Key factors driving and trends in the move towards shared print archiving

1. The economic downturn and the environment of fiscal constraint in higher education necessitate new ways of operating. This prompts even deeper cooperation among libraries, traditionally a leading sector in cooperation in higher education.
2. Library futures include less construction of new space for collections, including storage facilities, closing of branch libraries, and increased pressure to convert book space to user services space.

⁹ Courant, Paul N. and Matthew “Buzzy” Nielsen, “On the Cost of Keeping A Book”, in *The Idea of Order: Transforming Research Collections for the 21st Century Scholarship*. CLIR Publication no. 147, June 2010, p. 99

¹⁰ Schonfeld, Roger and Ross Housewright, *What to Withdraw: Print Collections Management in the Wake of Digitization*, September 29, 2009, <http://www.ithaka.org/ithaka-s-r/research/what-to-withdraw>

¹¹ Malpas, Constance, *Shared Print Policy Review Report* (Dublin, Ohio: OCLC Research, 2009), p. 5, Published online at:

<http://www.oclc.org/research/publications/library/2009/2009-03.pdf>

3. In thinking about their local collections, research libraries appear to be moving beyond local pride and measuring success by the number of volumes and the size of their budgets, to a more regional and national perspective on what is available to local constituents. This is aided by de-emphasis of collection size in Association of Research Libraries (ARL) rankings and ever-improving mechanisms for resource sharing.

4. Increased recognition that few libraries will be able to afford to keep everything in their collections, and attempting to do so is not necessarily the best use of limited resources. A collective approach offers significant economies of scale.

5. The shift from competition to collaboration manifests in a quickened interest in making local collection management decisions in the context of community-wide programs and strategies. Business models are beginning to emerge to support system-level collaboration in collection management.

6. The growing corpus of digital surrogates in trusted archives (e.g., HathiTrust, Google Books, Portico) is stimulating widespread interest in drawing down redundant print holdings. Constance Malpas projects that by 2014 more than 60% of the retrospective print collections held in ARL libraries will be duplicated in HathiTrust¹².

7. Research on the cost of storing scholarly materials points to significant cost savings through cooperation, collection consolidation, and format transition. Cost data below from Courant and Nielsen¹³ represent present discounted value for digital storage and for four different print shelving systems. These cost estimates include the cost of cleaning, maintenance, electricity (heating and cooling), staffing, and circulation, as well as the amortized construction cost for building space.

ANNUAL AVERAGE STORAGE COST PER VOLUME:

Digital Storage*	Open Stack	High Density	Hybrid (first 10 years in open stacks)	Hybrid (first 20 years in open stacks)
\$0.15 - \$0.40	\$4.26	\$0.86	\$1.53	\$1.99

[*digital storage costs vary depending on nature of the file and degree of backup]

With over 980,000,000 volumes in academic libraries, and less than 10% of them in storage facilities, the pressure locally and nationally to convert valuable

¹² Malpas, Constance, (2011), op cit, p. 10

¹³ Courant, Paul N. and Matthew “Buzzy” Nielsen (2010), op cit, p. 91

central campus real estate to “higher yield” purposes will only increase with time. This is particularly true for the approximately 30% of those volumes already scanned, however only a portion of these are in the public domain.¹⁴

List of shared print archiving models and initiatives

Following is a list of shared print archiving initiatives Demas learned about in his research on behalf of MLAC. A number of these are models or contain elements that MLAC will want to study as it evolves.

1. WEST (Western Reserve Storage Trust)

Building on years of cooperative storage and preservation activity within the UC system, and with funding from the Mellon Foundation, WEST is by far the largest and most ambitious existing shared print archiving program. WEST is just now beginning implementation of set of policies and procedures developed by the membership, with leadership of Emily Stambaugh (California Digital Library) and Lizanne Payne (Consultant), two of the leading thinkers and practitioners nationally in shared print archiving. They now have 89 libraries west of the Mississippi among their membership and over the next few years will be implementing a program that will likely lead the way for the nation in evolving business models, policies, operations, and coordination in shared print archiving. There are a surprising number of small libraries in the WEST membership as they seek to align their collection management efforts with larger national efforts. The initial focus of WEST is with journals. **Emily Stambaugh’s article “Heading West: circling the wagons to ensure preservation and access” in the November issue of *Against the Grain* (see planning project wiki) is a must-read for Advisory Board members.**

2. Committee on Institutional Cooperation (CIC)

Through UMTC, CIC is in a very real sense MLAC’s likely regional consortium partner in a potential shared print archiving. At present the structure and long-range aims of CIC shared print archiving are nascent. CIC’s planned initial effort focuses on shared storage of 250,000 volumes of STM and other journal back-file volumes to be housed in a new storage module at Indiana University. These will initially be drawn from the Indiana collections, but may later be supplemented with holdings of other institutions. This project includes developing a model for subsidizing the cost of ingest (processing) and an annual subsidy for Indiana as a storage hub.

3. Regional shared print archives

Many (but not all) of the following programs are shared print journal archives on a distributed archiving or “archiving in place” model. This involves institutions

¹⁴ Malpas, Constance, (2011), op cit, p. 10

agreeing to retain journal runs in their campus libraries (under specified storage conditions) on behalf of the membership. Frequently these are publisher-based programs, focusing on readily identifiable, widely held journals readily available in electronic form, such as JSTOR, IEEE, AIP, Elsevier, ACS, APS. However, they are often more broadly based, aiming to secure retention agreements for journal titles in many disciplines.

- a. ASERL (Association of Southeastern Academic and Research Libraries)
-Includes a journal retention project based on local interests and a Collaborative Federal Depository Project to develop a jointly held comprehensive government document collection for the region.
- b. GWLA (Greater Western Library Alliance) has a distributed archiving program that will be folded into WEST.
- c. Maryland Digital Library
- d. OhioLink - Runs five regional depositories in Ohio. Is currently developing de-duping procedures to reduce holdings to two copies system-wide.
- e. OCUL (Ontario Council of University Libraries) - Their Thunder Bay Agreement describes a distributed archiving program for a "last copy" program based on long-term retention agreements.
- f. Orbis Cascade - A multi-type library distributed archiving program that will be incorporated into WEST.
- g. TRLN (Triangle Research Libraries Network) - Has a very good MOU describing its effort to "create a shared collection (called "Single Copy Program") that may be more complete than any of our separate collections¹⁵".
- h. UKRR (United Kingdom Research Reserve) - A partnership between the UK higher education sector and the British Library, UKRR aims to preserve three copies of low use print research journals nation-wide. One copy will reside in the British Library and two in the collections of other UKRR member libraries.

4. Discipline-based programs

In cooperation with the Center for Research Libraries, the United States Agricultural Information Network and the Law Libraries Microform Consortium are developing nation-wide discipline-based approach to shared archiving that emphasizes building a national resource to enhance research in the discipline, and to continue cooperative systematic digitization efforts in their disciplines.

5. Miscellaneous programs

¹⁵ TRLN Single Copy Program, Memorandum of Understanding, August 2008.

- a. Maine Shared Collections Strategy project was funded by IMLS to develop a statewide strategy of shared management of legacy print collections.
- b. CAVAL, based in Melbourne, Australia, operates the CARM Centre, a storage facility for low use print materials. Initially CARM deposits were owned by the membership, but more recently members have decided they wish to retain local ownership.
- c. Washington Research Library Council in District of Columbia has a shared journal collection and non-duplication policy for the storage facility shared by its eight member libraries.
- d. CARLI (Consortium of Academic and Research Libraries in Illinois) has a last copy program through which member libraries can voluntarily donate unique materials they are withdrawing to University of Illinois Champaign Urbana for possible inclusion in their collection.
- e. Five College Library Depository (MA) share a storage facility comprised of journal and book deposits from the members. Four of the five members cede ownership of their deposits to the consortium, which aids in cooperative collection management. The fifth, U of MA, cannot cede ownership to the commons due to state restrictions.
- f. Bridge Consortium (St. Olaf and Carleton) has a collection management and development aim of “two collections that operate as one”, and conducts both prospective collection development and retrospective management jointly to make best use of acquisitions funds and collection storage space.

6. Center for Research Libraries

As part of its Global Resources Forum, CRL proposes an ambitious program to support print archiving initiatives in North America. Broadly speaking, CRL’s program seeks to provide an integrative framework in support of existing and nascent shared print archiving consortia, including:

- a. “Promote consensus among consortia on the terms of archiving and levels of service to participating libraries, and frame and administer cooperative agreements to provide those services,
- b. Provide communication, logistical, and fiscal agency and support for cooperative print archiving activities and services, among participating libraries and services,
- c. Facilitate development of common holdings analysis tools and delivery system(s) necessary to support print archiving, and
- d. Disseminate best practices and data-driven rationales for preservation and, where appropriate, de-accessioning¹⁶”.

¹⁶ *Discussion Document for participants in Boston meeting*, January 15, 2010, Center for Research Libraries, Cooperative Print Management in North America.

7. OCLC Research

Constance Malpas and colleagues from OCLC Research have produced many studies that help lay the foundation for a national system of shared print archiving. In her recent *Cloud-sourcing Research Collections*, Constance Malpas' most recent publication begins to articulate the elements of a business model for a national system of shared print storage. This report projects the potential cost avoidance for libraries at \$500,000 to \$2,000,000 per year per ARL library if such a system were in effect today. Key elements of the business model that seeks to optimize management of our legacy collections to ensure long-term survivability of 'last copies' and low-use materials include:

- a. a group of libraries/storage facilities that step up to proactively build collections that deliver maximum operational value to external audiences by collectively archiving multiple copies of widely-held, low use materials on behalf of the nation.
- b. a service program that knits these carefully crafted collections into a network of shared print management hubs providing preservation and access services for member libraries.
- c. an economic model in which member libraries share in the expense of subsidizing these collection service hubs for their work on behalf of the commons.

One of the key findings from OCLC Research is that **the drivers that produced our current storage collections in North America (un-thoughtful, hurried transfer of very low use and scarcely held materials to storage) yields a collection profile that is nearly the opposite of that is needed to contribute to national, rather than strictly local, collection management**¹⁷. Hence the emphasis from OCLC Research on the importance of careful management of our collections in the national interest to realize their maximum value for preservation and access nationally. Understanding that most of the collections in our nation's storage facilities (including MLAC) were not built with national needs in mind, and that to become nodes in a national network will require thoughtful retrospective management of our collections, is an important part of the rationale for some key recommendations in this planning study.

8. Ithaka

Through its thoughtful research and reports, notably Schonfeld and Housewright's excellent *What to Withdraw: print collections management in the wake of digitization*, 2009, and through its convening function, Ithaka is a major player in the national conversation about shared print management. The JSTOR and Portico services are leading journal preservation and access programs that point

¹⁷ Personal communication with Constance Malpas, February 8, 2011.

in the direction of national cooperative solutions that are based in productive working relationships with the publishing community.

9. HathiTrust

The major player, with scans from Google Books and other mass digitization initiatives, in preserving and providing access to digital surrogates for print research collections, HathiTrust is now beginning to explore linking digital archiving and access programs to shared print archiving. This very logical extension of HathiTrust's digital archiving work is something MLAC will want to watch closely.

10. Decision support tools

As the pressure for more space in libraries grows, organizations are responding to the need for a new class of decision support tools. These are designed to normalize library catalog data and allow comparison of one's collection with those of other libraries, with authoritative lists, and with use data. While still in early days of development, we should expect to see more such tools. JSTOR has developed a tool to aid in decisions about withdrawing JSTOR back files; R2 Consulting's *Sustainable Collection Services* software is now in beta and looks very promising; SUNY Geneseo's library staff has developed an interesting open source *Gift and De-selection Manager* that assists in gathering data in support of decisions about adding gifts and weeding; and CRL is reportedly working on a decision support tool. Presumably as this class of tools matures, it will integrate a broad range of holdings information, including availability of a digital surrogate in HathiTrust, thus making it easier to withdraw materials within the context of shared print archiving programs.

Challenges and opportunities

While the path forward to truly shared collections is daunting, work is already underway on many of the challenges listed below.

1. Nationally, our storage facilities are reaching capacity, but system-wide we continue to acquire about 25,000,000 new print volumes annually¹⁸.
2. When establishing collection policies for our storage facilities in past decades, we lacked the political will to prevent unnecessary duplication and did not face the space constraints now in play. Since academic libraries do not want to discard materials if there is a reasonable alternative, our storage facilities include significant amounts of duplicate materials.

¹⁸ Payne, Lizanne, from her power point presentation to LLAMA Storage Discussion Group at ALA Midwinter 2011; data based on ARL statistics for 2008.

3. Limitations of bibliographic records and holdings data make it difficult to assess our national storage overlap and capacity; and we need more effective disclosure of holdings, retention commitments, access commitments, and preservation condition;
5. We have little experience nationally with proactively managing storage collections to achieve a sensible profile that supports a viable national business model; libraries lack robust policies and shared best practices on withdrawal and disposition of materials;
6. The common wisdom that it is too expensive to retrospectively manage storage collections may prove true for many institutions, but not for others. There is no research to guide us on this.
7. There is a natural tension between serving both access and archiving missions in the same facility with one set of policies and procedures.
 - a. What is an acceptable loss rate in a storage facility, in open-stacks distributed archiving?
 - b. How do we monitor adherence to retention and storage commitments?
 - c. Is the high overhead cost of developing shared print archiving programs that perform both archiving and access sustainable? Should we simply rely on digital surrogates for access and store print backups in dark archives?
 - d. How many copies of a book or journal do we keep for the nation?
8. There will continue to be faculty pushback against national collections consolidation; absent vigorous local, regional and national level outreach, engagement and education with the scholarly community, shared print archiving will be likened to “book-burning”;
9. Just as scholars identify with their disciplines even more than with their institutions, they should be able to conceptually identify with the idea of a national collection built for their disciplines. But academic and library administrators, along with scholarly societies, need to communicate a compelling, positively framed strategy for a national collective collection and shared archiving.
10. Lack of a legal settlement regarding access to the in-copyright Google Books corpus keeps a huge corpus of digital surrogates locked up; in-copyright titles will require delivery of print copies for foreseeable future;

11. The infrastructure for coordinating national shared print archiving does not yet exist and there is not yet a clear umbrella agency to steer this infrastructure development.

Perils inherent in shared print archiving:

There are potential perils inherent in shared print archiving that should be addressed forthrightly, even if one does not agree with them or if some are simply not solvable:

1. In the absence of a nationally coordinated system to support shared print archiving (i.e., if we delay very long in implementing a system); libraries will make mistakes (i.e., withdrawing materials that should be retained) as increased fiscal and space pressures accelerate the existing isolated collection management efforts.
2. Some academic libraries may succumb to the temptation to conduct stealth weeding operations because it seems easier than dealing transparently with their faculty and the scholarly community. Resulting flare-ups could set efforts back by years.
3. As the number of copies in the nation shrinks, the remaining copies may accrue considerable artifactual value, making them vulnerable to theft; this could exacerbate the tension between access and archiving missions.
4. Concentration of valuable scholarly assets in a few locations is counter to the principle that “lots of copies keep stuff safe”.
5. Potential societal unwillingness to adequately fund a robust, hybrid scholarly communication system with a sound balance of both print and digital preservation and access could result in excessive reliance on digital access. This could imperil the development of our civilization by dangerously favoring the present obsession of our culture – digital access – and thereby upsetting an essential balance between the communication forms on which we rely. This might unwittingly fulfill the warnings of Harold Innis (the political economist and philosopher of communications who influenced Marshall McLuhan), of a media obsessed “present-mindedness” and the “continuous, systematic, ruthless destruction of elements of permanence essential to cultural activity”¹⁹,
6. A system of access to knowledge that rests too exclusively on a foundation of access to digital surrogates is vulnerable to the periods of interruption – of long and short duration -- of electrical current and reliability of the internet that will doubtless characterize our civilization over the coming centuries.
7. Public libraries collect many genres not collected by research libraries (e.g., popular fiction and biography and self-help) that much later become invaluable sources for cultural historians. If public libraries are not included

¹⁹ Innis, Harold, *Changing Concepts of Time*, University of Toronto Press, 1952, p. 15, quoted from Wikipedia article on Innis.

thoughtfully in a national program of shared print archiving there is a danger that such materials will be discarded when their life cycle in public libraries ends, but before their research value triggers a pass-off into a shared print archiving program. Minneapolis Central Library is an important counter-example of a public library that sees itself as having a research mission, especially for fiction.

Part 2: Evaluation & Analysis of MLAC Today

Policy and governance

Conceived as a storage and access center, MLAC today has many elements of a shared collection. However, its policy and governance structure was developed in an era in which depositing libraries were not prepared to cede control of their materials in ways that could optimize sharing and managing the MLAC collection. The essential tension between archiving and accessing stored materials persists, but looking towards a future of shared print archiving requires a re-examination of policy and governance in light of emerging best practices.

Summary of best practices

Constance Malpas of OCLC Research worked with a task force in 2008 to conduct an analysis of the policy and governance documents of 16 North American storage facilities. The resulting report identifies these critical components²⁰:

1. Explicit retention commitment (regardless of duration) for titles committed to the shared archive;
2. Identification of conditions under which materials may be recalled or temporarily withdrawn from the archive;
3. A commitment to provide access to shared collections.
4. Definition of terms: duplication, withdrawal, what constitutes reasonable effort to replace lost or missing items, etc.

This report also recommends that *“cooperative agreements that are intended to achieve or to enable truly transformative change in the way library print collections are managed should include:*

1. *A business model that acknowledges the changing value of library print resources in the current information environment;*
2. *An explicit acknowledgement that effective disclosure of library holdings and retention commitments is necessary to support distributed management of print archives; and*

²⁰ Points 1-4 are excerpted from Constance Malpas, *Shared Print Policy Review Report* (Dublin, Ohio: OCLC Research, 2009), p. 5, Published online at: <http://www.oclc.org/research/publications/library/2009/2009-03.pdf>

3. A commitment to capture, retain and share item-level condition information so that the preservation quality of print archives may be better judged".²¹

Based on the "Shared Print Policy Review Report," and a review for this report of ten policy and governance documents, other specific topics that should be addressed in updated policy and governance documents (or associated in operational guidelines) include:

1. description of governance and policy-making framework,
2. service-level agreements (e.g., circulation, ILL, use for reserves),
3. an escape clause,
4. collection management (e.g., environmental controls, periodic audits, conditional withdrawal of items),
5. criteria and procedures for withdrawal (e.g., notification of depositing libraries, changing records locally and centrally),
6. duplication policy,
7. last copy policy,
8. collection policy and selection criteria, including a list of formats included in and excluded from the collection,
9. cataloging guidelines (esp. holdings).

MLAC's policy and governance: analysis and recommendations

The MLAC *Packet for Depositing Libraries* (December 2002), available on the project wiki site, is a compilation of formal documentation on MLAC policies and procedures. Included are two key policy documents, *Operating Principles and Guidelines* and the *Memorandum of Agreement* signed by each depositing library. Analyzing these two policy documents using the review template developed by the RLG Partnership Shared Print Collections Working Group provides a good sense of the strengths and weaknesses of MLAC's existing policy and governance documentation and practices.

In general, the existing MLAC policy and governance framework has served the depositors and those who rely on MLAC well over the past decade, but is not designed to support a collection conceived and managed as a shared print archive in the sense that is cohering today. With some fairly minor modifications MLAC will be better positioned to serve the state and to participate as a node in a national shared print archiving program. A true shared collection will require more formal policy development and monitoring mechanisms, more clarity about collection management, and more precision in articulation of governance and administration of the collection. A more detailed delineation of the "terms

²¹ Ibid. p. 12

of engagement” or “rights and responsibilities” of depositors and other users of MLAC is essential.

The following policy and governance topics should be discussed and decided by the Advisory Board over a series of meetings this spring. Following this, the existing policy and governance documents, including the Memorandum of Agreement with depositing libraries, should be re-written to reflect and support the updated purposes and strategic directions of MLAC.

A detailed analysis of MLAC’s policy and governance documents and recommendations on the changes needed is included as Appendix 5. This detail will be useful to a sub-group tasked with updating the policies. What follows is a brief outline of the areas in need of review:

1. Formal Policy Statement

The existing “Operating Principles and Guidelines” combines both procedural guidelines and principles, but does not purport to set forth formal policies.

2. Vision and Mission

The current vision statement is no longer visionary; it has been achieved:

As a shared depository for infrequently used library materials of importance to the people of Minnesota, the Minnesota Library Access Center will provide a climate controlled environment and make the deposited items accessible for use.

A more aspirational vision that points MLAC in the direction of active participation in shaping a shared national collection seems more appropriate for this epoch in MLAC’s history. There is currently no MLAC mission statement.

3. Governance framework and memorandum of agreement

The current statement of governance (section 1.4 of “Operating Principles and Guidelines”) does not adequately address a number of key issues, including how the MLAC Advisory Board operates and its role *vis-à-vis* UMTC Libraries’ collections in MLAC. There are a number of good models that we can learn from, including some of those linked from the Center for Research Library’s “Print Archiving Service Agreements”: <http://www.crl.edu/archiving-preservation/print-archives/service-agreements>

4. Ownership/explicit retention commitment

Currently MLAC policy is that depositing libraries retain ownership of their deposits (see section 2.7 of Operating Guidelines...). While “it is

expected that deposited materials are intended for permanent storage,” depositing libraries may reclaim deposits at any time. This makes it impossible for the MLAC collection to serve as a truly shared collection against which libraries can safely withdraw local holdings with assurance that these will be accessible via MLAC.

5. Policy on duplication

MLAC, along with most other storage facilities, has wrestled with the problem of duplicates since before its inception. Libraries in a hurry to deposit materials in MLAC did not have the time to check for duplication. In the early days of MLAC, the MLAC Advisory Board, like those of other storage facilities nationally, had neither the political will nor the motivation to insist on a “no duplicates” policy. The time has come to remedy this.

6. Shared copy/last copy policy and program

Once we have binding ownership/retention and “non-duplication” policies in place, we could begin to manage the MLAC collection more effectively in the collective interest. This would entail development of policies and guidelines for overall management of a formal “last copy” or “shared copy” program that would be at the heart of MLAC’s service to the state as a shared archiving facility.

7. Cataloging

In the early days of operation, MLAC had specific cataloging guidelines that depositing libraries were expected to meet for deposits. Again, for a number of reasons, use of these guidelines has become less consistent with MLAC staff taking responsibility for copy cataloging and ensuring that records are adequate. We should revisit this workflow and determine if there is a need for MLAC cataloging guidelines. In particular, we should ensure that we are adhering to national best practices for effective disclosure of holdings and preservation/archiving commitments on stored materials, and for item-level condition information.

8. Escape and exception clauses

If we have a more formal and binding set of policies as recommended above, we will need to address how to handle requests for exceptions (some could be made by MLAC staff, others by the Advisory Board), and instances where an institution wishes to withdraw from its commitments to MLAC.

9. Service level agreement

With a strong service program built on the Minitex delivery and resource sharing infrastructure, our service level agreement is largely in place and very effective. However several circulation policy issues should be clarified.

10. Business model

The business model on which MLAC operates is not mentioned in the current policies, except for the statement (in ii3.d of "Operating Principles...") that "... no fees will be assessed for collection storage." A clear statement of how MLAC is funded and the rights and responsibilities of depositors is needed.

Administration and management of MLAC

MLAC is managed by Minitex and reports to the UMTC University Librarian Wendy Lougee, with roles designated as follows. Tim McCluske manages MLAC with a staff of 2.3 FTE (including Tim). Tim reports to Kathy Drozd, Assistant Director of Minitex, who in turn reports to Bill DeJohn, Director of Minitex, who reports to University Librarian Wendy Lougee. Liaison roles between MLAC and UMTC Libraries include Charles Spetland, Collection Development Officer, for coordination of transfer of materials to MLAC, and Peggy Johnson, Associate University Librarian, for matters concerning technical services and space/facilities management. Tim McCluske is a member of the Cataloging Coordination Group, but finds that most of the meeting topics are not directly relevant to MLAC. MLAC staff consults with UMTC Libraries staff on matters of cataloging and collection management. However, UMTC Libraries staff is, understandably, primarily concerned with the UMTC Libraries deposits in MLAC.

That said, the current relationship is not a troubled one, and there are excellent professionals at all levels of both organizations who have long experience working together, and there is clear evidence of good will on all sides. While this arrangement appears to have worked well during this period of stability in MLAC mission and operations, there have been occasional disjunctions, such as misunderstandings about cataloging standards and practices, and some confusion about the role of a separate database of non-UMTC MLAC journal titles that MLAC staff maintains.

As we move into a new era of increased collection management within and between Minitex/MLAC and UMTC Libraries, there will be need for closer communication and coordination. A shared print archiving program would require more intensive communication and coordination between UMTC Libraries and Minitex/MLAC in day-to-day operations, development and

implementation of collection management policies, and joint project management.

My observation is that the following topics should be discussed to determine if adjustments might be useful in the administration and management of MLAC as we move forward.

1. Is the current administrative structure optimal going forward?
2. Is there a better way of structuring the communication, coordination and relationship between UMTC Libraries and MLAC? How do we best link UMTC Libraries collection management strategy and activity to MLAC and statewide collection management and strategy? What will be the relationship of the soon-to-be-hired UMTC Libraries Preservation and Collection Management Strategist to MLAC? Should we formalize Peggy Johnson and Charles Spetland's liaison roles to MLAC?
3. Might it be possible to link MLAC into the UMTC Libraries Collections Strategic Steering Committee, perhaps through a sub-committee on collection management?
4. Who represents the non-UMTC depositing libraries in discussions of collection management?
5. Ohio State University Libraries has assigned a librarian to work with their OhioLink storage facility on collection management projects. Might such a model have some application for us?
6. Should the Preservation and Collection Management Strategist be appointed to the MLAC Advisory Board? Should we consider a working group of the Advisory Board to develop plans and oversee joint collection management activity with UMTC Libraries?

Optimizing MLAC's shelving capacity

MLAC is at about 89% of capacity, with room for only another 206,280 volumes. This is not only an immediate problem in terms of accommodating Minnesota's growing collections; it is not enough space to make MLAC a viable hub in a national shared print management program. Absent another cavern, which, again, is not a viable option at this time, the only options for increasing shelving capacity are:

1. De-duplication,
2. Installation of compact shelving, and
3. Withdrawing out-of-scope materials securely archived elsewhere

The first two options are discussed immediately below, and the latter, more speculative, is discussed in Part 3: The Future of MLAC.

1. Duplication, de-duping, and withdrawals

Best estimates are that there is a 14% duplication rate overall, constituting 127,000 duplicate periodical volumes (a 21% duplication rate in periodicals) and 75,000 duplicate monograph volumes (a 9% duplication rate in monographs). More work needs to be done to verify these estimates, but they indicate that there is scope for significant collection management to both make room for additional unique materials and to position MLAC to play a role as a shared print management hub. Appendix 6 contains a detailed discussion of the challenges attendant to de-duplication. What follows is a brief outline of the considerations in de-duping MLAC and the costs and benefits of withdrawing materials securely archived elsewhere.

- a. The logic of eliminating unnecessary duplication is powerful. One important caveat is that not every title should be de-duplicated; we must be sensitive to instances when a title is rare or of special institutional or cultural significance.
- b. There are significant limitations on the ability to estimate duplication with precision, but we are making progress on this challenge and should be able to come up with estimates in which we have a high confidence level.
- c. To help get a sense of the costs of withdrawing journal runs from MLAC, Tim McCluske conducted a trial to determine the steps and time involved in withdrawing duplicate journal runs for six titles. See Appendix 7 for a detailed breakdown, but the bottom line is that on average it took 47 seconds per volume and offers hope that it may be feasible to conduct large-scale de-duping of journal runs in a high density storage facility.
- d. The common wisdom is that de-duplication is too expensive to be cost-effective. However, two factors are precipitating a questioning of the common wisdom:
 - i. the current economic climate, including a moratorium on many campuses on construction of new storage space, and
 - ii. the ascendancy of a paradigm of shared collection management that relies in part on more carefully profiled storage collections that can make shared print management economically viable.
- e. As a consequence, **there is a crying need nationally for data on the costs and benefits of managing storage facilities, and MLAC is extremely well positioned to provide leadership in filling this information gap. Grant funding should be available for this**

purpose, and it would be advisable to move quickly to assemble a project team and submit a proposal in partnership with CIC and other university storage facilities.

2. Compact shelving installation

The most obvious way to create additional shelving capacity within MLAC is to install compact (or mobile) shelving.

The alternative of renting or leasing space was not explored in this study. However, it should be noted that UMTC Libraries staff looked into this for storage of archival collections. According to Peggy Johnson, they found the cost of off-site storage to be prohibitive for space that met the stringent environmental requirements for archival materials and that would support retrieval on a need basis. The UMTC Libraries worked with the campus to have on-campus space assigned to the Libraries; the Libraries provided funds to remodel and install shelving to accommodate archival boxes and staff to retrieve and return materials to this space. Additionally, the Libraries rent space from the University Printing Service, with the intent to use this for dark storage, from which materials will not be paged. Again, the Libraries paid for modest remodeling and installation of high-density shelving. It is not clear whether it is worth further investigation of this option, but UMTC Libraries have indicated that they are in active discussion about potential leased space and we may want to revisit this option in future.

Retroactive installation of compact shelving in MLAC would be an expensive undertaking, requiring concrete work and protection of the floor membrane, lighting and fire protection modifications, and re-working of existing HVAC system. In addition, the logistics of vacating the space, storing the books, and re-shelving after installation are costly and complex. Other than cost, the primary downside to mobile shelving is that, while fixed shelving is mechanically fail-safe, moveable units are subject to failure and raise operational costs for retrieval.

Bernadette Corley-Troge, Kathy Drozd, and Tim McCluske developed a detailed cost estimate of compact shelving for the MLAC cavern, which is attached as Appendix 4. Their analysis calculates the costs and amortization periods for several options. The bottom line is that it would be more cost-effective to dig another cavern or to build aboveground storage space. Actual installations of shelving and attendant construction costs were estimated at about \$3,000,000. With additional temporary storage costs and collection moving fees, the bottom line jumps to just over \$5,800,000.

The simplest model studied, installation of mobile shelving in the existing cavern, would result in a 35% increase in shelving capacity, or 548,800 volumes.

The payback period on construction cost is 2.7 years. It seems unlikely that this option will be viable. By comparison, estimated cost of a third cavern equipped with mobile shelving, an option not under consideration, is \$14,000,000; this would add capacity for 2,100,000 volumes and amortize over less than 2 years (See Appendix 4).

Political context

MLAC, serving 21 depositing libraries, functions within a complex political context. That said, operations are characterized by stability, lack of conflict, and a general sense of good will. It seems worthwhile to briefly characterize the political context within which MLAC seeks to shape its future. Part of the Advisory Board's strategic planning deliberations should include a brief and frank conversation about these realities and an invitation to flesh out this political context. While there is nothing particularly troubling in our situation, a full and shared understanding of where we are today will help shape how we can best serve the state in the future.

Following is a sketch of the reality within which we currently operate. This is not a suggestion that anything be changed, but an attempt to ensure that there is a common understanding of the complex context within which MLAC operates.

1. Minitex is a respected and effective resource-sharing consortium. Its resource sharing programs are prized by the libraries of Minnesota, and its interlibrary loan network is a critical component of regional library operations.
2. Minitex receives funding in its budget from the Minnesota Office of Higher Education to operate MLAC. The MLAC collection, which is about 85% from academic libraries, is in concert with this funding source. As the Director of Minitex, Bill DeJohn reports to the University Librarian. While the Minitex budget is part of the University Libraries financial portfolio, the Minitex funds are designated solely for its programs and services.
3. Because all MLAC operating costs are covered by the state appropriation to Minitex and depositing libraries do not pay any fees, MLAC depositing libraries may be less involved with and concerned about operations and policy development than is the case in shared storage environments that operate on a shared cost basis. It is not entirely clear how we incentivize deeper collaboration in this financial context, other than through offering more space savings in our home libraries.
4. There is presently no mechanism for engagement of academic faculty, administrators or other local stakeholders in shaping MLAC and its future.

5. The state legislature has generally been supportive of Minitex, but the current economic climate and situation in state politics suggest that funding will be tight for the foreseeable future.
6. The state of Minnesota has a long history and enlightened policy of including private colleges in many library programs it funds, including MLAC.
7. The connection of Minitex to UMTC is a great strength for Minnesota libraries, as it positions Minitex and MLAC to act as a library in relation to interlibrary loan and copyright, for example.
8. The University of Minnesota, Twin Cities, is the state's flagship land grant university. It has a reputation in the Minnesota library community for being very open to working with and supporting Minnesota libraries. It takes seriously its land-grant role as a library serving the state. Liberal access to its collections is the foundation of our highly effective statewide interlibrary loan network operated by Minitex.
9. UMTC Libraries is highly respected within the University of Minnesota context and has received good budgetary support within the context of the difficult financial realities of the University. However, prospects of receiving state funding through the University's capital budget process for additional cavern space are not good; we must plan for MLAC's future with that option off the table for now.
10. UMTC Libraries has yet to fully resolve in its own mind its responsibilities as a "library of record" or "backstop collection" for the citizens of Minnesota. While there appears to be no statutory mandate or existing agreement stating that UMTC Libraries play any formal role as a library of record for the state, clarity about UMTC Libraries' role would be a key factor in moving forward in shaping a shared collection strategy for the state.
11. UMTC Libraries faces serious space problems in housing its collections. It could fill up the remaining space in MLAC in a heartbeat -- a fact that sometimes makes the non-UMTC depositing libraries nervous. However, now that MLAC is nearly full, maintaining the 60/40 split may be a distraction from the important work of optimizing the holdings of MLAC to serve an even wider audience.
12. UMTC staff constitutes a rich resource of expertise and experience on which MLAC can draw. Two particularly pertinent examples include a copyright specialist, a preservation and collection management strategist.
13. MLAC Advisory Board meets infrequently and is advisory to the University Librarian. It is unclear how the deliberations of the MLAC Advisory Board relate to the collections of the largest MLAC depositor, the UMTC Libraries. On a day-to-day operational level, Tim McCluske is the voice of the other 20 depositing libraries in conversations with UMTC Libraries.

14. UMTC Libraries' most natural and powerful consortial affinities are with its peer institutions in the CIC and ARL. UMTC Libraries is a leader in these national forums and will play an active role in shaping the national shared collection.
15. The future of MLAC as a shared collections component of the emerging regional and national shared collections network will depend largely on decisions by UMTC Libraries on how it decides to participate in the national shared collection. This will most likely be through CIC, which means that MLAC joining WEST, for example, is probably not an option for us to consider.
16. While working relations between UMTC Libraries and Minitex/MLAC are satisfactory for day-to-day operations in a period of stability, it will be important to better align operations and communications going forward, particularly if we are entering a period of policy change and a cultural shift as described in the strategic directions recommended in the final sections of this report.
17. Minnesota has a long history of cooperation between public and private libraries and there is a general assumption that this will continue in the emerging shared collections environment. The state has generously and wisely included private colleges in its support for resources sharing activities.

Renaming MLAC

As the mission of MLAC evolves, a name change may be a way to signal a larger or changed mission. The name has long been thought to be too general, and I recommend that the name be revisited as part of a larger review of mission and vision. Something that better signifies the overall mission would be desirable. The current name emphasizes the access half of the shared print archiving equation and ignores the archiving/preservation half. Suggestive examples include "Minnesota Storage (or Shared Collections) Trust," or MN Shared Print Archive, or, Joan Roca's suggestions: Minnesota Interlibrary Shared Trust (MIST), or MN Inter-library Shared Storage (MILSS). The correct choice of name may be more apparent as a national shared print archiving, and its regional components, begin to take clearer shape in a few years. A logistical consideration is that the name MLAC might need to be changed in existing library catalogs.

Financial model and operational costs

A 2003 study by Bernard Reilly²² compares operating costs by dividing total operating budget (exclusive of depreciation and debt retirement) by the current

²² Bernard Reilly and Barbara DesRosiers, "Developing Print Repositories: Models for Shared Preservation and Access" (Council on Libraries and Information Resources, June 2003)

number of volumes stored. Annual cost per volume figures range from a low of \$0.17 to a high of \$2.38. Dividing MLAC's total 2010 operating budget of \$201,740 by its collection of 1,402,157 volumes yields a remarkably low annual operating cost per volume of \$0.14. We can be pleased with a very cost-effective operation.

The financial model for operating MLAC may be unique among N. American storage facilities: the annual state appropriation to Minitex through the Minnesota Office of Higher Education includes the operating budget for MLAC. As noted before, depositing libraries do not pay any fees for storage or access to their materials or any other MLAC materials. Depositing libraries are responsible, however, for the cost of preparing and shipping materials to MLAC. MLAC collections are available through interlibrary loan to other libraries in the Minitex region and beyond.

It is not yet clear how the current financial model would scale in a national shared print management regime. However, early signs are that shared management schemes will include operational subsidies paid by subscribers to print providers, so the net financial effect on MLAC (the state) could be negligible after addressing the initial startup costs of intensive collection management.

Survey of Minnesota Libraries – Collection Management Needs and Attitudes

Separate surveys were sent to large public libraries and to four year and university level academic libraries in Minnesota to assess their needs and attitudes regarding library space and collection management. Forty-eight libraries (26 academic and 22 public) completed this survey. Appendix 9 provides a list of the questions and summary analysis of the results.

This section presents a sketch of Minnesota libraries based on the survey results. The focus is on academic libraries, by far the largest group of MLAC depositing libraries. However, significant differences in the responses from public libraries and academic libraries are noted. Several of the survey questions were borrowed from the *Ithaka S+R Library Survey 2010: Insights from U.S. Academic Library Directors*. Where possible, comparisons are made between the Minnesota responses and those of Ithaka's national survey population.

Most Minnesota libraries will need more space for both collections and users within the next 10 years. Fifty-four percent of academic libraries (66% of public libraries) report they will need space for both users and collections, and 11% of academic libraries (26% of public libraries) are already at zero-growth for

collections today. Most are only able to continue to add new materials because they are weeding lesser-used materials. Seventy-nine percent of academic libraries (91% of public libraries) have been weeding their collections for some time now and will continue to do so. Most (89%) are weeding both books and journals, and 73% are weeding reference materials.

The weeding of Minnesota libraries is happening in an uncoordinated way, i.e. decisions are made on a case-by-case basis rather than as part of a larger plan or a cooperative strategy. Only 27% of academic libraries (none of the public libraries) indicate that they have a formal collection management plan for de-accessioning print materials that are also available digitally. Only 9% of academic libraries (15% of public libraries) indicated that they are currently working with other Minnesota libraries in managing their collections. However, respondents indicate both an awareness of and interest in the potential benefits of cooperative collection management. The survey provided mixed signals in attitudes towards cooperation in de-accessioning. On one hand, 50% say they are not influenced in managing their print journal collections by the decisions that others are making. At the same time, 73% report that they prefer to de-accession print materials knowing that there will reliably be print copies in the region. This seems to indicate that respondents recognize the value of cooperative collection management, but do not have the resources (time and established mechanisms for cooperation) to do so.

When presented with a description of a robust national shared print archiving system for books based on a dual duplication strategy, 54% indicated that they would likely withdraw books as part of a trusted sharing network, compared with only 33% in the Ithaka survey.

When presented with a description of a state or regional distributed archiving system, 83% indicated interest in exploring the benefits of participation. Eighty percent indicated they were likely to de-accession materials as part of such a system, and 83% were likely to participate by volunteering to retain certain print titles in trust as part of a distributed archiving system. Several offered local history materials and special collections as examples of what they would volunteer to retain.

There is a significant difference in attitudes towards withdrawing journals vs. books in light of availability of surrogates in digital form. For example, 68% of respondents feel they can responsibly de-accession copies of all JSTOR digitized journals and 77% are comfortable with replacing hard copy journal collections with electronic journals. However, when asked if within the next five years the use of digital resources will be so prevalent among faculty and students that it will not be necessary to maintain print collections, only 13% of academic libraries

(35% of public libraries) agree with this idea with regard to books, while 52% agree with regard to journals. The Ithaka survey noted this pattern of divergence with similar rates of response.

There is a fairly high level of interest among academic libraries in workshops related to collection management. In priority order, respondents selected the following topics for possible MLAC workshops: 1. Setting priorities for digitizing content from your collections (80%), 2. Developing a collection management policy for your library (60%), 3. Weeding monographs (56%), and 4. Proper storage and handling of library materials (44%). Public library interest in these was low, except for developing a collection management policy (50%).

Similarly, there is a fairly high level of interest among academic libraries in some potential new MLAC services. In priority order, respondents selected: 1. Analog to digital conversion services (72%), 2. Writing grant proposals for cooperative collection management (60%), and 3. Microform storage services (52%). Public library interest in these services was low.

Last but not least, 74% of academic libraries (60% of public libraries) are satisfied with the current MLAC services. Since many respondents are not contributors and rarely use MLAC, particularly among the public libraries, this is a very positive response.

Evaluation of other aspects of MLAC operations

The following sections, located in Appendix 8, are important but unnecessary for the most immediate purposes of this planning study. Please review them for useful background information:

- Security, environmental controls, and emergency preparedness
- Services
- Cataloging
- Staffing

Part 3: The Future of MLAC

MLAC's future directions should ideally align with the evolving shape of research library collections in the 21st century. While much about the future of library collections remains unclear, the following appear to be inexorable trends shaping the context within which MLAC's strategic plan will be enacted.

The HathiTrust corpus of digital surrogates for our print collections will continue increasing by more than 150,000 volumes per month and seems likely to reach some 17,000,000 volumes -- equal in size to Harvard University Libraries -- by

2013.²³ Access to this corpus, even if only browsing access is allowed for the in-copyright portion, will dramatically enhance discoverability of materials in our legacy collections. There will be less library construction and more pressure to make better use of existing space. A national network of shared print archives and service delivery system will likely emerge over the next five years, stimulating a greater level of cooperation in collection management and development among academic libraries than ever before. This cooperation will be based to a large degree on the reality of “dual duplication”, i.e., the twin availability of materials in print and electronic form, which will stimulate a nationally coordinated draw down of the number of print copies of low use materials in college and research libraries. The business model for shared print management will likely include operational subsidies for service hubs, paid for by subscribing libraries and consortia, to help cover ingest and operational costs.

With this prelude to consideration of MLAC’s future, we begin by re-framing the question of how MLAC might evolve.

How to make best use of space in MLAC?

From storage facility to shared collection: re-framing the question

This study aims to guide the MLAC Advisory Board as it seeks to optimize space in the facility. Initially, the planning discussion was framed in terms of the costs and benefits of de-duping and retroactive installation of compact shelving. The goal was narrowly defined as determining the best use of remaining space in the MLAC cavern. **As this study progressed, it became clear that the best solutions required a more strategic approach to the problem grounded in a broad re-definition of MLAC’s goals and mission.**

MLAC can not only address local space needs, but also position itself to play a prominent role nationally by shifting from a passive storage model serving Minnesota to a national shared print archive approach. The mission of a proactive shared collection would be to shape MLAC and UMTC Libraries legacy collections so they deliver maximum operational value to Minnesota libraries, and to the nation. By participating in a nascent shared archiving scheme, ultimately encompassing U.S. research libraries system-wide, MLAC has an opportunity to help develop and to model best practices within a constrained fiscal environment. How do we get from here to there?

²³ *Shared Print Policy Review Report* (Dublin, Ohio: OCLC Research, 2009), p. 18, Published online at: <http://www.oclc.org/research/publications/library/2009/2009-03.pdf>

To test this expanded notion of MLAC, we must first clarify UMTC Libraries' role as a library of record, or backstop library, for Minnesota. The next step is to examine the relationship of UMTC Libraries' collection to MLAC, both as it stands today and in its ideal embodiment. With these determinations as a foundation for future discussions, the Board will define the strategic direction for MLAC in relation to shared print archiving efforts in the region and in the nation. To contribute as a service node in a regional and national shared print archiving program, MLAC should develop an intentional, proactive collection policy, which in turn will shape a joint collection management plan for UMTC Libraries and MLAC.

This section outlines a series of steps to determine the best use of the remaining space in MLAC, going from the general to the specific. With this document as a guide, the Advisory Board will address the role of MLAC in regional and national networks and define collection priorities, all within a context of data about holdings and demand. Next, the group will determine whether MLAC can create enough space to play the role of significant hub in a shared print management network. A cost-benefit analysis, addressing de-duping, withdrawals, and compact shelving, will provide the foundation for the more visionary aspects of the conversation.

Elements of a framework for answering the question

The following recommendations are offered to ground the Advisory Board's discussion on MLAC's future. These recommendations, in turn, inform the following three scenarios for MLAC's future outlined below.

1. **UMTC Libraries should formally embrace and define its role as a collection of record for Minnesota.** As a major research library UMTC Libraries has, as a central part of its mission, preservation of the scholarly record. As the only comprehensive research collection in the state, and with its long history of generous collection sharing via Minitex, it is time that UMTC Libraries define an appropriate role as a library of record or backstop collection. Minnesota libraries and the citizens of Minnesota already depend on the collection of their land grant library as their backstop for a staggering range of inquiry. While UMTC Libraries' role *vis-à-vis* the state is not defined in statutes or formal policy documents, it is largely established through tradition and practice, and is inherent in its land grant mission.

UMTC should not be pressured to declare itself **the** library of record, but could elect to become **a** library of record in selected areas. It is only fair that UMTC Libraries be supported by the Minnesota library

community in articulating a clear and manageable definition of its central stewardship role for Minnesota, lest UMTC Libraries commit to more than it can afford to deliver. We should be careful not to paint UMTC Libraries as the “bad guys” as they move to define and limit their role in a more nuanced way than just “library of record,” a meaningless designation until it is defined.

For instance, UMTC Libraries cannot and should not be a library of record for all subjects. There are many areas in which it collects at only an informational level and areas of former strength in which it no longer collects widely or deeply. Other libraries in the state may wish to assume stewardship responsibility for some areas. For example, the libraries of the College of St. Benedict/St. John’s University have stronger collections than UMTC Libraries on Catholicism and monastic studies. Another example is that the Mayo Clinic libraries, in combination with the UMTC Biomedical Library, constitute Minnesota’s centers of excellence in clinical medicine. Thus, it may be helpful to identify the specific subject areas and genres in which UMTC Libraries is prepared to make preservation commitments, and others subject areas in which centers of excellence are named. My earlier report *Enduring Access to UMN Collections*, recommends a set of initial preservation priorities that may provide a starting point for this discussion, as do the collection of distinction areas identified for digitizing by Google.

Also, we should consider what it means to be a “library of record” in a shared print archiving environment based on “dual duplication”, i.e., availability of materials in both print and digital form. To what extent does this entail a commitment to retaining specific titles or collections in print form? And to what extent is it a matter of building and maintaining the relationships and cooperative agreements with other shared print archives that ensure Minnesotans access to resources?

UMTC Libraries role for the state may well include being a steward of regional and national partnerships that benefit the libraries of Minnesota through resource-sharing agreements. Does this imply that there should be a formal organization of Minnesota Libraries (MLAC?) with whom the university acts on behalf of all Minnesota libraries?

In the end, perhaps the key to UMTC Libraries performing as a library of record for Minnesota is more a matter of building in the mechanisms to ensure that *the interests of Minnesota libraries are factored*

into all its collection management decisions, than it is designating specific titles and/or subject areas for stewardship priority.

A serious effort to define UMTC Libraries stewardship role for the state will be met with friendly support and ready participation from Minnesota libraries. It can be a component of developing a joint collection management plan for MLAC and UMTC Libraries.

2. In considering the role of MLAC in a national shared print archive scheme, **we must expand the scope of analysis to include the totality of holdings of UMTC Libraries (and, ideally, all the depositing libraries).** This approach of considering UMTC Libraries and MLAC as a single shared collection has the potential to significantly improve the business proposition of MLAC/UMTC Libraries as a shared print management hub.²⁴

To this end, as the largest library in the state, the biggest depositor in MLAC, an active participant in HathiTrust and Google Books (which is in the process of digitizing more than 1,000,000 volumes from UMTC Libraries collections), **UMTC Libraries should articulate the relationship between its print collections in campus libraries, the HathiTrust corpus of digital surrogates, trusted commercial digital services like Portico, and the MLAC collection.** We would all benefit from an explicit articulation of the criteria that will be used to manage UMTC Libraries' huge legacy collection and how UMTC Libraries' management of its campus collections ideally relates to its deposits in MLAC. For example:

- a. Will UMTC Libraries retain a print copy of all monographs in its collection? If not all, then which ones?
- b. Will UMTC Libraries retain a copy of all serials, or just some? How will we address JSTOR journals? When certain publisher-based archives mature (e.g. ACS, IEEE, AIP, APS), will UMTC Libraries and/or withdraw their holdings?
- c. Will UMTC Libraries retain one (or more) copies of all materials scanned by Google and added to the HathiTrust corpus?

²⁴ Malpas, *Cloud-sourcing Research Collections*, 55-56. A key finding of the *Cloud Study* report is that off-site storage collections as currently constituted have only limited value; it is only by re-conceptualizing these collections as part of a broader scope of collections (i.e. situating them in the broader 'cloud collection') that their value is optimized. This is a key argument for harmonizing UMTC Libraries and MLAC collection management as a precursor to locating them within a larger regional and national framework.

- d. For the print collection components for which UMTC Libraries is prepared to make retention commitments, which will reside in MLAC and which in campus libraries?
- e. What is the preferred policy regarding duplication between UMTC campus libraries and MLAC?
- f. How will MLAC deposits from UMTC Libraries fit into its plans to withdraw and rely on access to other shared print archives, e.g. WEST, CIC, CRL, etc.
- g. What sorts of UMTC Libraries materials will be deposited in MLAC versus those stored in the Wilson Library Annex, the West Bank Office Building, the Printing Services building, or other future storage sites?

UMTC Libraries is currently working on a set of policies and strategies for a coordinated approach to collection consolidation and storage decisions. This process will address many of these questions. It is too early to address others, and it will certainly take time to develop an overall collection management plan. But, absent synchronized collection management and policy development in these areas, it will be very hard to intelligently manage the remaining space in MLAC and set a future course for MLAC.

3. In light of the centrality of UMTC Libraries collections to Minnesota libraries and to the MLAC collection, and given the fact that the non-UMTC portion of MLAC is 93% full, **it may be time to abandon the formal 60/40 split between UMTC Libraries and non-UMTC deposits.** The MLAC collection effectively represents that split today. Rather than quibble over the little remaining space and how to parse any space gained through withdrawals, we might better focus instead on aggressively managing the existing MLAC collection as a whole. We should determine future deposits in ways that maximize the ability of Minnesota (and other) libraries to realize space savings and cost avoidance. This would allow maximum flexibility to re-shape the MLAC collection to maximize its value as a trusted shared print archive against which libraries can manage their own collections.
4. Development of a strategic plan for MLAC should include input from administrators from the depositing institutions (i.e. academic and municipal leaders) in addition to the librarians. Such institutional officers need to consider the costs and benefits associated with collection management and storage options.

5. The Advisory Board should clarify the rights and responsibilities of depositing libraries through the development of an updated policy and governance framework that is aligned with the new strategic plan.

A new collection profile for MLAC

The promise of shared print archiving will require a fundamental shift in collections management, including “a proactive effort to rationalize collections that are undergoing a radical phase change from print to digital...and proactively building collections that will deliver maximum operational value to external audiences....by accelerating the transfer of mass-digitized titles to print preservation repositories.”²⁵

Storage facilities are at the center of this fundamental shift from local *de facto* collections to carefully tailored regional components of a national collection. As they are currently configured, the 70+ storage facilities nationally have limited value individually as sources of stock for a national shared print archive.²⁶ Malpas argues that this is because they were developed and are managed as local resources primarily built and populated in response to urgent local space pressures. Since they were not intentionally built in the context of a long-range strategy, they do not necessarily align with a national pooled demand profile. Turning these facilities into useful national resources is best accomplished by:

1. proactively managing these collections (i.e., adding and withdrawing materials) according to a thoughtful, distinctive collection profile consciously aligned with known needs/demand,
2. linking the development of these storage collections to the growing digital corpus and, thus gaining, the “dual duplication” effect benefit of two complementary formats that seems optimal for balancing both access and archiving expectations for stored materials²⁷, and
3. aggregating a complementary subset of these storage collections into a network of shared print management hubs selected to best meet the need/demand profile of libraries nationally.

As we consider the best niche for MLAC, the following should be considered:

1. Journal runs
2. Discipline or domain-based collections
3. Low use, widely held monographs

²⁵ Ibid., p. 11

²⁶ Ibid., p. 55

²⁷ Ibid., 47

To determine the optimal collection profile, MLAC must conduct an in-depth collection and needs analysis to map the existing holdings, understand their relationship to other library collections, regionally and nationally, and assess the need/demand that would result from each of the various options. This would most likely entail a cooperative project involving CIC, ARL, OCLC, MLAC and UMTC Libraries' Enterprise Technology. Such an analysis was not within the scope of this study, but could be conducted within a matter of months if deemed important. This analysis could be conducted with the guidance of Constance Malpas if she is willing.

Even in the absence of complete data, it seems the hypothesis that a collection profile emphasizing monographs offers a very promising value proposition for UMTC Libraries/MLAC to serve as a shared print management hub.

Following is a brief sketch of the key advantages and disadvantages of each of these options, and the key reasons for not selecting the other options. **First the reasons for not favoring the other two options:**

1. Journal runs - The provision of print journal runs is a key component of a national shared print system, but one in which considerable work is already underway, including within the CIC in its work with Indiana University. It also involves the challenges of dealing with inconsistent local holdings records and verification of completeness and best copy.
2. Discipline or domain-based collections - This could well be a promising approach, but it is one best pursued as part of national efforts, such as the one CRL is leading in conjunction with existing law and agriculture communities. It may take some time to cohere such efforts, and the likelihood of national collaboration in humanities disciplines (where UMTC Libraries has great strengths in addition to sciences and the professions) is not great. A disciplinary approach can potentially dovetail nicely with a broader with emphasis on monographs.

Advantages and disadvantages of a monographic collection emphasis

Following are the arguments pro and con for a collection policy and management strategy that emphasizes monographs:

Advantages

1. It builds on the existing MLAC collection profile (56% monographs and 44% serials).
2. It aligns with major strengths of UMTC Libraries collections. UMTC Libraries monographic holdings are very strong, with a high proportion of unique materials within CIC (15%), and with tremendous diversity and depth in terms of language holdings. This appears to be the area in which

- UMTC Libraries and MLAC can make their best contribution to the national collection.
3. Monographs are the biggest cost driver in library collections and many libraries will be motivated to participate in a shared management scheme focusing on monographs²⁸.
 4. It maps well to the HathiTrust digital corpus; 90% of the titles currently in HathiTrust are monographs, and more than 50% of the titles in HathiTrust are in humanities fields.²⁹ If UMTC Libraries uses inclusion in HathiTrust (along with “low use, widely held” as criteria) as a trigger for transfer to storage, it can potentially free up substantial space in campus libraries. (See Disadvantage #3 below for an important caveat on this advantage.)
 5. If UMTC Libraries elects to scan monographs rejected by Google because of condition, it could take advantage of a pre-selected body of content that potentially maps to both UMTC Libraries’ collection strengths and to MLAC’s target profile.
 6. Operational advantages of focusing on monographs:
 - a. Monographs do not carry with them the same level of overhead as journals in terms of verifying completeness and best copy for retention. The existence of digital surrogates offers the promise of crowd-sourced validation and cooperative programs of filling gaps.
 - b. It is more cost-effective to withdraw journals than monographs, because one is withdrawing many volumes at once and because journals in MLAC are generally shelved in a continuous run, making it more efficient to fill in the space freed up by withdrawal.
 - c. By withdrawing journal volumes within the context of a national program that reliably archives journal back runs elsewhere, we can gain a great deal of space both within MLAC and in campus libraries. This space gain will, in turn, open up more space for monographs at 2.3 monograph volumes for every journal volume withdrawn (or not added in future).
 - d. The bibliographic records for monographs have fewer complexities associated with them than journals.
 7. With Minitex’s strong service delivery capacity and MLAC’s relatively low operational costs, we are well positioned to perform as a service hub.
 8. In the eyes of faculty, particularly humanities faculty, the role of shared print supplier (i.e., to archive print copies on-site as a service provider for others) may be preferable to that of a shared print consumer (i.e., to rely on service hubs for access to print copies).

²⁸ Stephen Lawrence, Lynn Silipigni Connaway, and Keith H. Brigham “Life Cycle Costs of Library Collections: Creation of Effective Performance and Cost Metrics for Library Resources,” *College and Research Libraries* 62 (6) (November 2001): 541-523.

²⁹ Malpas, *Cloud-Sourcing Research Collections*, p. 22.

9. If UMTC Libraries policy is to retain one copy of all its monographs, there is reduced selection overhead in collection management decisions.

Disadvantages

1. It may be difficult to hit the sweet spot of identifying monographs for transfer to MLAC that are both widely held and low use. Missing the mark will result in higher circulation rate and, therefore, higher operational costs.
2. As the number of copies of monograph titles drops nationally, the value of the remaining copies may increase to the point that loaning them becomes a security risk. This could upset the balance of access and security that is important in shared print archiving and could necessitate a future shift towards a more restrictive circulation policy.
3. **Only 26% of the collection of 6,000,000+ HathiTrust digital surrogates is in the public domain, leaving access to the remaining 74% in limbo awaiting the Google Books legal settlement and the ongoing project to clear rights for the sizable body of "orphan works."** It is too early to know how widely accessible and affordable the bulk of the HathiTrust corpus will be, and therefore the viability of the strategy of "dual duplication."
4. Operational disadvantages of working with monographs versus journals:
 - a. It is comparatively more expensive to accession new monographic deposits than journals.

To jump-start this critical planning conversation, we should move as quickly as possible to test this hypothesis and stake a claim nationally to a role as a hub as a provider of widely held, low use monographs.

Does MLAC have enough space to serve as a hub in a national network?

Perhaps the key constraint on our ability to serve as a shared print management hub is whether we can offer enough space to make a meaningful contribution to regional and national efforts. This, in, turn depends on the cost-effectiveness of actively managing (de-duping, withdrawing, and re-filling space gained) the collection. If we assume that we can find affordable, cost-effective approaches to collection management that are significantly cheaper than building new space or installing mobile shelving, then we can begin to estimate the potential capacity for additional materials in MLAC. The following assumes we withdraw 2/3 of the duplicate monographs and 40% of the total serials in MLAC (half of which are duplicates, the other half would be titles reliably archived by other institutions participating in a national shared print management program).

Space remaining in MLAC:	206,280 volumes
Potential for de-duping (66% of total monograph dups)	50,000 volumes
Potential withdrawals (40% of existing serials in MLAC)= 615,344 * 40% = 246,137 * 2.3 mono vols/serial =	<u>566,166 volumes</u>
TOTAL POTENTIAL SPACE AVAILABLE (space for 360,000 periodical volumes)	822,446 monograph volumes (or space for 360,000 periodical volumes)

This estimate, if it is accurate and realistic, gives us reason to hope that we can create the space necessary to serve as a national print management hub.

Estimated cost of de-duplication and withdrawal

The following calculations are a preliminary test of the feasibility of large-scale collection management. This estimate is based on the assumption above of de-duping 50,000 duplicate monographs and 246,137 periodical volumes, rounded to 300,000 volumes. It is further based on Tim McCluske's estimate of 47 seconds per volume to withdraw periodical volumes. Rounding this to 1 minute per volume, it takes 1,666 hours or .75FTE to withdraw 100,000 volumes (100,000 minutes/60 minutes/hour=1,666 hours). Multiplying .75 FTE times 3 (for 300,000 volumes) indicates that 2.25 FTE would be needed to withdraw 300,000 volumes in a year. Adding in a 25% contingency due to the paucity of hard data we have on this, the estimate is increased to 2.8FTE. Multiplying this 2.8FTE by \$50,000 per FTE (salary and benefits) indicates a total cost of \$140,000. Adding in a 25% contingency for good measure yields a total cost of \$175,000 to withdraw 300,000 volumes. More work is needed to refine this estimate, but it provides a useful comparison with other options for increasing MLAC shelf space.

Comparative costs of options for creating more space

A comparison of the costs of four options for creating more shelf space in MLAC shows that de-duping and withdrawals, while they yield the least space, may be the most cost-effective. This analysis is based on the cost estimates in Appendix 4, plus those made in the section on the cost of de-duplication, in the previous section.

	New cavern with compact shelving plus compact shelving retrofit of existing cavern	New cavern With compact shelving but <i>without</i> retrofit of existing cavern	Compact shelving retrofit of existing MLAC cavern	De-duping (50,000 monos & 246,000 serials, p. 41)
Estimated added capacity (volumes)	2,648,800	2,100,000	548,800	615,800*
Total cost	\$17,000,000	\$14,000,000	\$5,802,513	\$175,000
Cost per volume	\$6.43	\$6.67	\$10.57	\$0.28
Amortization**	1.89 years	1.96 years	3.1 years	10 months

[*50,000 monograph volumes + 565,800 volumes (246,000 serial volumes x 2.3 serial volumes per monograph volume) = 615,800 volumes

**Years for ROI derived by dividing the cost per volume by the difference between annual cost of open stacks storage (\$4.26/vol) & high-density storage (\$0.86/vol).]

Three Possible Scenarios for MLAC

Following are three possible scenarios MLAC might choose to guide its strategic planning. These are in essence sequential steps on a continuum, rather than radically different scenarios. Doubtless there are other scenarios we might productively consider.

As will be obvious in comparing the three scenarios with the recommendations in the preceding section of the report, my recommendation is that we focus on Scenario 2. Thus, the Strategic Plan elements outlined in Part 4 below are based on this option.

1. Maintain status as an effective storage facility for Minnesota

In this scenario, we would move closer to the idea of a shared collection, but not attempt to manage the MLAC collection towards a more optimal collection profile. The focus would remain on serving Minnesota libraries, and we would not proactively shape the collection in directions that maximize its value to libraries outside the state or as a shared collection against which Minnesota libraries can manage their local collections. We would retain the 60/40 UMTC Libraries/MLAC split and manage the remaining space with the aim of helping the depositing libraries free up space in their local collections through additional transfers to MLAC. In essence, MLAC would remain a *de facto* collection of low-use materials from the current set of depositing libraries. We would make adjustments to our operational policies and governance based on lessons learned in the first decade of operation.

Policy and governance adjustments might include: moving to a stance of minimal or no duplication, securing a 25 year retention agreement from depositors, devising a single set of loan policies for all deposits, and possibly developing a last copy policy. In addition, it would be advisable to clarify some of the issues of governance (appointment, terms and decision-making process and authority of the Advisory Board) and administration of MLAC (how to effect optimal coordination and communication between Minitex/MLAC staff and UMTC Libraries staff).

This scenario would represent a modest, but important, step in the direction of a shared collection for Minnesota libraries. This would be the least costly option in terms of time invested by the MLAC and UMTC Libraries staff and time in discussion by the MLAC Advisory Board and depositing libraries.

2. MLAC/UMTC Libraries as a jointly managed shared collection with a collection profile focused on monographs and serving as a shared print management hub as part of a regional and/or national program.

In Scenario 2, we would move more aggressively to re-position MLAC as a shared repository for Minnesota and as a hub in regional and national shared print archiving. MLAC and UMTC Libraries would partner with greater intensity and intention in shaping collections that offer great value to Minnesota and other libraries. Many of the key elements of this scenario were outlined above in **Part 3: How do make best use of remaining space in MLAC**, and this scenario forms the basis for the strategic plan elements in Part 4 below.

Scenario 2 includes all the actions outlined for Scenario 1, and goes further by:

- a. UMTC Libraries carefully defining and clearly embracing its *de facto* role as a collection of record for the state. This could take

many forms, including a role in reaching access agreements on behalf of Minnesota libraries within CIC and other regional consortia.

- b. UMTC Libraries and MLAC jointly fashioning collection management plans that are in harmony and that guide us implementing a vision of MLAC and UMTC Libraries as complementary collections that operate -- to the extent legally, operationally, and politically feasible and desirable -- as one shared print collection in service to the state. Determine mechanism for engaging non-UMTC depositing libraries in developing the guidelines for such coordinated collection management.
- c. Conducting pilot cost/benefit studies of collection management techniques such as de-duping and withdrawal of materials in MLAC.
- d. To the extent feasible, proactively shaping the MLAC collection to conform to a profile that maximizes its value as a shared collection against which local collection management decisions can be made within the state and nationally. Withdraw materials that are being archived securely in other repositories, and that do not support the optimal collection profile.
- e. As part of CIC or WEST, declaring an intention (as it becomes clear to whom one declares such intentions!) to become a shared print management hub that focuses on low use, widely held monographs in humanities and other subject areas that build on UMTC Libraries collection strengths and the HathiTrust digital corpus.
- f. Determining whether we have the capacity in terms of space to serve as a regional and/or national hub.
- g. Exploring and helping to shape emerging business models for shared print management, determine if the demand is sufficient to warrant MLAC's investment in proactive collection management to achieve a collection profile that represents a viable business proposition.
- h. Attempting to negotiate a joint ownership policy for the shared collection in MLAC, but using a 25-year retention policy as a fallback alternative.
- i. Participating in the CRL project to develop a domain-based approach to shared print management in law and agriculture to determine the potential benefit to UMTC Libraries/MLAC.
- j. Re-structuring the administration and management of MLAC if and as appropriate to support a higher degree of joint collection management than ever before.
- k. Reviewing the financial model for MLAC in light of its expanded role and services.

Scenario Two would entail considerable investment of staff and Advisory Board time in fashioning a viable approach. The cost of collection management to free up space for new materials to conform to a viable collection profile would be significant and would likely be borne locally. External coverage of ingest costs for new materials and for ongoing maintenance is more likely, but depends on the development of a national subscription model to cover the costs of national hubs and could require adjustments to the current MLAC financial model.

3. MLAC as statewide distributed archiving program and shared catalog

Scenario Three would include the elements of Scenario Two and also:

- a. Developing a plan for scanning for delivery of non-circulating materials and for producing books-on-demand MLAC materials. Investigate copyright implications.
- b. Developing plans for a distributed archiving program for Minnesota.
- c. Working with other entities as appropriate to explore creating a web-scale shared catalog for the state, possibly built on OCLC WorldCat, which would facilitate discovery and management of the contents of the shared print archive.
- d. Digitizing selected MLAC holdings from the shared MLAC collection for access by members/depositors. Assess the use of Section 108 of Copyright Law to move ahead to scan for the benefit of “members” of the shared collection. Re-consider ongoing scanning of books rejected from Google Books project.

Determining the role of a scanning capacity for MLAC could arguably be part of Scenario Two. However, it seems too ambitious to attempt to develop a distributed archiving program for Minnesota at the same time that we are working to fashion a niche for UMTC Libraries/MLAC in the regional national program. By the time we are underway with participation at a national scale, the nascent distributed archiving programs would have gained significant experience. In 3-5 years, we can better assess the cost-effectiveness of a statewide program and its potential value in the regional/national program.

Part 4: Recommended Strategic Directions

Following are the key strategic directions recommended to the MLAC Advisory Board for discussion. These might eventually be worked into a formal three to five year strategic plan for MLAC. These recommendations are meant to jump-start strategic planning discussions, which may result in entirely new and different strategic directions for MLAC Advisory Board for discussion.

Where these topics have been discussed in previous sections of the report there are simply references to the relevant section of the report. Topics not discussed previously will include a brief overview of relevant issues. Work on many of these elements would occur in parallel with provisions for managing the essential inter-relationship among these separate elements.

1. Align vision, mission, governance and policies to support a shared print management role for MLAC

Reorient MLAC to participate in the paradigm shift of shared print management by updating its policies and governance documents, and revisiting the vision, mission, name, etc. The topics to be addressed in such a review are discussed in Part 2 and a detailed inventory is included in Appendix 5.

2. Generate and analyze data needed to refine the niche and scale of shared print hub role

Assuming a focus on monographs, conduct analyses to develop a collection profile that meets state and national needs. **MLAC and UMTC Libraries, in cooperation with OCLC, CIC, and ARL, should secure and analyze data to determine what specific shared print collection profile would best support a viable business model for MLAC's potential service as a shared print management hub.** We will want to first assess the service value of the MLAC collection as it exists today, then optimize it proactively to a collection profile that will clearly meet a demand level that can sustain the collection through operational subsidies tied to the demand profile. This will require a wide range of collection data, focusing particularly on monographs, but also looking at journal holdings. Following are some key analyses that would go into shaping UMTC Libraries/MLAC's shared print archiving profile/role:

- a. Compare MLAC holdings to those of the following libraries to identify, by genre, overlap and the most and least commonly held titles:
 - MLAC depositing libraries
 - UMTC Libraries
 - All Minnesota libraries
 - Minnesota academic libraries

- b. Compare UMTC holdings to those of the following libraries to identify, by genre, overlap and the most and least commonly held titles:
 - All Minnesota libraries
 - Minnesota academic libraries
 - ARL libraries

- c. Subject distribution of MLAC collection, by genre.
Subject distribution of UMTC collection, by genre
- d. Total titles and volumes in MN libraries.
Total titles and volumes in MLAC depositing libraries
Total volumes added to MN libraries annually
- e. Duplication between HathiTrust and:
 - MLAC
 - UMTC Libraries
 - All Minnesota libraries
 - Minnesota academic libraries
- f. Subject distribution of HathiTrust titles held
 - MLAC
 - UMTC Libraries
 - All Minnesota libraries
 - Minnesota academic libraries
- g. Compare UMTC Libraries, MLAC, and HathiTrust holdings to standard bibliographies and reviewing sources to determine feasibility of including these pre-selected bodies of monographic literature as components of a collection profile. While there are many such sources that could be analyzed, prime examples include: *Choice*, *Resources for College Libraries*, *Core Historical Literature of Agricultural Sciences*, *Chronicle of Higher Education* book reviews, *American Historical Association* book reviews, and the like.
- h. Compare HathiTrust holdings of reference sets (fact books, bibliography series, yearbooks, etc.) with those of CRL's shared reference collection, and with MLAC and Minnesota library holdings.

3. Strengthen capacity to participate as a shared print management hub:

- a. **Take leadership in securing grant funding within the next six months to conduct an in-depth study of collection management costs and benefits.** To maximize the utility nationally of the resulting baseline data, conduct this study in conjunction with CIC and involve several CIC schools, each representing a different storage facility configuration. Specifically, analyze:
 - i. De-duplication costs in three different types of storage facilities, with MLAC as an example of Harvard-style high

density storage. Withdrawal of JSTOR titles may be a logical target test case; this might be done in cooperation with CRL and/or others who have made JSTOR retention commitments.

- ii. Cost of withdrawing different kinds of materials, e.g. journals, monographs, reference sets. Take into account the cost impacts of the extent of clustering of holdings.
 - iii. Cost of re-filling of trays
 - iv. Optimal levels of standards validation
- b. Determine whether it is a good investment to install compact shelving.
 - c. Cataloging – **Secure a unique OCLC symbol for MLAC and develop a new set of cataloging guidelines** based on emerging national standards for use of 583 field and other relevant cataloging practices.
 - d. Explore the value of conducting a CRL Certification or a Self-Assessment program as means of certifying MLAC's role as a trusted archive for the nation.
 - e. Join CRL's Shared Print Archiving Registry.
 - f. **Strengthen management and operations capacity to address the challenges of intensive collection management and an expanded role for MLAC.**

4. Develop a proactive collection profile, policy and management plan

Articulate a clear statement of what collection strengths and profile MLAC/UMTC Libraries has to offer the emerging program of shared print archiving. Based on the analyses above, write a new collection policy statement for MLAC and a plan for achieving the collection profile identified. Assuming the recommended focus on monographs is affirmed by data analysis above, refine the focus to include specific language, date, subject, genre or other guidelines to articulate a clear and precise role for UMTC Libraries/MLAC in the national collection.

The essential components of a joint collection management plan for UMTC Libraries and MLAC are suggested in the list of questions on p. 37 of this report section on *Suggested elements of a framework for addressing the question*. In addition, specifically consider including:

- a. Guidelines for periodicals withdrawal, including both duplicate and unique titles. Analyzing the list of duplicates, which titles (if any)

should we focus on and why? Looking at our unique journal holdings, which titles should we withdraw and why? What percentage of our journal holdings should we aim to withdraw and why? Since the highest cost in withdrawing journals is likely to be in title selection, consider withdrawal of JSTOR titles, titles of specific publishers archived elsewhere, and titles included in other specific disciplines or aggregations archived elsewhere. Consider the cost of assessing condition and completeness of journal runs when consolidating sets.

- b. Guidelines for withdrawal of duplicate monographs and possibly non-unique titles that do not fit the established collection policy/profile. What percentage of the duplicate monographs should be withdrawn and why? Establish criteria for identifying titles with local importance, special artifactual or monetary value, limited holdings nationally, or rare or unusual materials that should be retained even if they fall outside the established collection profile.
- c. Guidelines for retention of materials for which digital surrogates are accessible, particularly within HathiTrust. Consider the merits of scanning locally titles rejected for scanning by Google due to foldouts, condition, or other criteria. Consider the merits of developing criteria for destructive scanning for materials in very poor condition.
- d. Discontinue transfer of materials to MLAC that do not fit the collection profile. Develop guidelines that enforce and justify the conceptual shift that local space pressures alone should not determine what moves to storage.
- e. Consider withdrawing from MLAC reference sets that are held in both HathiTrust and the CRL shared reference collection. HathiTrust contains about 95,000 reference titles, making this potentially a rich area for withdrawals.

5. Partner with foundations, CIC, HathiTrust, CRL, and others to define MLAC's role as a shared print management hub

The four strategic directions listed above will lay the groundwork for UMTC Libraries/MLAC to serve as a shared print management hub. Since the national shared print management structure does not yet exist, and CIC, our most likely partner, does not yet have a structure for shared print archiving, the exact path forward is still unclear. Nevertheless, by getting our own house in order as outlined in Strategic Directions 1-4 above, we will be prepared to put a stake in the ground early in the game, defining a collection profile that corresponds to a

clear demand profile, and coming to the national conversation with a governance and policy structure that is aligned with shared print, and a clear sense of our space, management and service delivery capacity.

To do this will require a great deal of preparatory work. This is work that has yet to be done by other storage facilities. We are in an excellent position to secure funding for this work because it will provide invaluable guidance to those among the other 70+ storage facilities that elect to step up to the challenge of shared print archiving. The elements of a grant proposal to fund the implementation of MLAC's strategic plan and thus lay the foundation for MLAC's transformation into a shared print management hub might include

- a. Data analysis (as described above) to determine the collection profile and corresponding demand profile that makes the best business case for MLAC's role in a national program. Developing guidelines and strategies for others who wish to undertake this kind of analysis.
- b. Developing a synchronized collection policy and management plan for UMLC Libraries and MLAC.
- c. Defining what "library or record" means in an era of 'dual duplication' and shared print management. Exploring the role of a flagship library of a state university in this new milieu.
- d. Developing a model governance structure, updated policies, and memoranda of understanding.
- e. Working with CIC to develop a sustainable business model for a shared print management hub.

6. Identify possible new services related to MLAC mission

The survey of academic and public libraries (see Part 2) asked respondents to rank ideas for potential new services and to offer their own suggestions. The Advisory Board should explore the feasibility of offering services most frequently ranked as of strong interest:

- a. Helping libraries develop collection management policies and guidelines that situate their efforts in the context of coordinated statewide and regional shared print archiving efforts.
- b. Setting priorities for digitization of local collections, and
- c. Analog to digital conversion services.

7. Review financial model in light of changes in mission, policy, governance and operations

Work with partners to help determine the cost implications of and financial model for shared print archiving and help develop a model for sharing costs among participating institutions nationally. This is the big advantage of shared

print archiving, but the business model has yet to be developed. Explore questions such as: What are the real costs of running MLAC and to what degree would these costs change in a shared print model? Would they be reduced by operational efficiencies, or would they potentially increase through increased demand for materials? How do we ensure continued high level of service to state while broadening our mission?

Part 5: Next Steps

In the February 23, 2011 MLAC Advisory Board Meeting to discuss this report there was consensus on many of the major strategic directions MLAC might pursue, and we identified topics that will require more study and discussion. These are summarized below in *Part 6: A Framework for the Future of MLAC*.

Straw polls at the February 23 meeting provide a clear sense of the general direction in which the Advisory Board wishes to move. The polls showed that Advisory Board members think that:

1. Among the three scenarios presented for MLAC's future on p. 44-46, scenario "2.5" is preferred. That is, scenario 2, becoming a shared print archiving hub, along with elements of scenario 3, in particular digitization of selected MLAC content.
2. The idea of a collection profile focusing on monographs was favorably received, but all agree that much more work needs to be done before settling on a profile.
3. It is worthwhile to invest further in studying the costs/benefits and methods of large-scale collection management for MLAC (i.e. de-duping, withdrawing, and accessioning to fill the space vacated through withdrawals).
4. We should apply for grant funding to support the strategic directions of MLAC.

Two straw polls conducted at the October Advisory Board meeting were repeated to determine if there was any shift in thinking.

1. There continues to be unanimous support for implementation of a non-duplication policy showed continued unanimous support.
2. There was a slight shift in attitudes about where we stand on the continuum of options for ownership of deposits in MLAC. While the group remained solidly in favor of each depositing library retaining ownership of its materials, there was a shift from requiring a 25-year retention commitment towards a "persistence requirement", meaning that all deposits to MLAC would be permanent. This shift strengthens the case for MLAC as a trusted, permanent backstop collection against which others can make local decisions.

At the conclusion of the February 23 meeting the Advisory Board identified some preliminary next steps. In his presentation Demas suggested key areas of focus in the coming months and Advisory Board members made a number of good suggestions and additions. The next steps identified in the meeting were:

1. Plan and hold meetings to discuss the Advisory Board’s deliberations with interested parties. These should certainly include all depositing libraries and the Council of Academic Library Directors. A joint meeting of these groups may be possible. Advisory Board members suggested additional groups: Minitex Policy Advisory Group and leadership of Minnesota Library Association (MLA), and possibly presentations at MLA meeting.

2. Update policies and memorandum of understanding for depositors. Two Advisory Board members volunteered to comprise a Task Force to begin work on this: Brittney Goodman and Michael Homan. There was discussion of the notion of using a “Joint Powers Agreement” rather than a MOU to update the understanding with depositors, and potentially with all Minnesota libraries in the context of a “federation” or other structure to reflect the existence of a shared collection.

3. Write and adopt a strategic plan. The Advisory Board was not prepared to undertake a strategic plan at this stage, but felt a brief “Framework” document describing the general directions for action that were affirmed in our discussions would be useful. This is included below as the final section of this report. This Framework can be used in initiating discussions both within Minnesota and with external partners.

4. Implement Strategic Plan, applications for grant funding, work teams, etc. Demas suggested some potential strategies for moving forward, but the Advisory Board needs more time for deliberation and research on the precise niche MLAC might best fill as a shared print archiving hub before initiating action on these steps.

In his presentation Demas suggested a range of tactics for moving forward on these next steps, including:

1. Appointing an Executive Committee of the MLAC Advisory Board.
2. Appointing one or more Task Forces to undertake specific tasks. These might include colleagues outside the Advisory Board membership and liaisons from logical organizations.
3. Asking UMTC and MLAC staff to undertake specific tasks.
4. Use consulting services for some tasks.
5. Combinations of the above.

There will be further discussions in the coming months to advance planning of MLAC's future.

Part 6: A framework for the future of MLAC

The first draft statement below summarizes the general future directions for MLAC that emerged from the February 23, 2011 MLAC Advisory Board meeting. It can be improved and updated over time for use in publicity and in initiating partnership conversations both within Minnesota and regionally.

A Framework for the Future of MLAC

With the underground storage cavern nearly full, the MLAC Advisory Board is developing a strategic framework to ensure that Minnesota libraries can continue working together to preserve and provide access to the scholarly record. This framework is based on the idea of positioning MLAC -- Minnesota's shared collection -- to play an expanded role within the state and in a larger national context, by participating in a nascent national program of shared print archiving. The Advisory Board invites comment on this framework, which seeks to address the space needs of Minnesota libraries and to help ensure the long-term preservation of the scholarly record at a cost that is affordable for the library community as a whole.

In this economic climate there is little hope of building additional MLAC caverns, so our future strategy is based on the convergence of several key trends in library resource sharing:

- a. the enormous (and growing) corpus of digital surrogates makes it possible to provide digital access to and preserve digital copies of a large share of traditional library materials (currently about 30% of research library holdings for the HathiTrust and a large body of commercial digital content), while cooperatively retaining some number of print versions as backups and for their artifactual value,
- b. a conceptual shift in libraries from a focus on managing their local collections to thinking of collection management as a national, system-level shared activity,
- c. the emergence of national and regional initiatives to cohere a coordinated approach to the development of business models and cooperative agreements to transform the nation's storage facilities into a network of shared print management hubs or service centers that form the nucleus of a shared national collection.

In response to the needs of Minnesota libraries and these national trends, the MLAC Advisory Board proposes that we reposition MLAC to play a leadership

role as one of these service hubs in a soon to be emerging regional and national shared print archiving program. This might also include an expanded service program for MLAC, including cooperative digitization of selected MLAC holdings and holdings of other Minnesota collections.

With the very strong resource sharing capacity and programs of Minitex, the strong collections and generous sharing of the University Libraries, and the history of cooperation among Minnesota libraries, MLAC is in a very good position contribute to national shared print archiving and continue its service to the state.

Achieving this vision of MLAC as a Minnesota participant in a national program to preserve the scholarly record will entail a number of activities in the next few years:

1. Updating vision, mission, governance and policies to support a role for MLAC as a shared print management hub. Specifically this would include implementing policies such as “non-duplication” and “persistence requirement” for MLAC deposits.
2. Developing methods and materials for telling the story of MLAC and Minnesota libraries as they strive to cooperate in preserving and providing access to the scholarly record, and to our legacy collections in particular in this difficult economy. Developing hard data to show the value of an updated MLAC program to the state.
3. Broad scale collection analysis to determine the optimal collection profile for MLAC as a shared collection against which Minnesota libraries can make decisions about managing their local collections.
4. Capture of cost data for de-duplicating the MLAC collection.
5. Based on cost data on de-duplicating collections, withdrawing duplicate materials from MLAC to make space for more low use, widely held materials in MLAC.
6. Developing coordinated collection management plans for MLAC, the University Libraries, and other interested libraries.
7. Developing some kind of state-wide “federation” or cooperative of libraries interested in cooperating in shared print archiving.

8. Partnering with OCLC, CIC, HathiTrust, Center for Research Libraries and others to define and implement MLAC's role as a shared print management hub.
9. Identifying possible new services related to MLAC mission.
10. Reviewing the MLAC financial model in light of changes in mission, policy, governance and operations.